

Compilation of Changes to the CPC Scheme Between 2020.02 and 2020.05

Presentation Details

- Entries for new symbols and headings: *Black text in italics*
- Entries for existing symbols and headings
- text insertions: *Green text in italics with yellow background*
- text deletions: ~~Red strikethrough text with grey background~~
- Entries for deleted symbols and headings: ~~Black strikethrough text~~
- In cases when the originating project cannot be found, "N/A" is given for the Project information (e.g. the change could be due to an Editorial Correction).
 - Projects ending in "-F" indicate finalisation after reclassification was completed.

Project: MP0439 (A01F)

M A01F

PROCESSING OF HARVESTED PRODUCE; HAY OR STRAW PRESSES; DEVICES FOR STORING AGRICULTURAL OR HORTICULTURAL PRODUCE (devices for topping or skinning onions or flower bulbs [A23N 15/08](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: N/A (A01G)

U A01G 9/00

Cultivation in receptacles, forcing-frames or greenhouses (of mushrooms [A01G 18/00](#); soilless cultivation [A01G 31/00](#)); Edging for beds, lawn or the like

WARNING

Group [A01G 9/00](#) is impacted by reclassification into groups [A01G 18/00](#), [A01G 18/60](#) and [A01G 9/28](#).

Groups [A01G 9/00](#), [A01G 18/00](#), [A01G 18/60](#) and [A01G 9/28](#) should be considered in order to perform a complete search.

A01G 9/20

- Forcing-frames; Lights {, i.e. glass panels covering the forcing-frames}

Project: N/A (A01H)

U A01H 6/00

Angiosperms, i.e. flowering plants, characterised by their botanic taxonomy

WARNING

Group [A01H 6/00](#) is incomplete pending reclassification of documents from groups [A01H 5/00](#), [A01H 5/02](#), [A01H 5/04](#), [A01H 5/06](#), [A01H 5/08](#), [A01H 5/10](#), and [A01H 5/12](#).

All groups listed in this Warning should be considered in order to perform a complete search.

A01H 6/50

- ~~Laminaceae~~*Lamiaceae*, e.g. lavender, mint or chia

WARNING

Group [A01H 6/50](#) is incomplete pending reclassification of documents from groups [A01H 5/00](#), [A01H 5/02](#), [A01H 5/04](#), [A01H 5/06](#), [A01H 5/08](#), [A01H 5/10](#), and [A01H 5/12](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0301 (A01N)

- M A01N 65/00** Biocides, pest repellants or attractants, or plant growth regulators containing material from algae, lichens, bryophyta, multi-cellular fungi or plants, or extracts thereof (containing compounds of determined constitution [A01N 27/00](#) - [A01N 59/00](#))

WARNING

Groups A01N 65/03 - A01N 65/48, with the exception of A01N 65/385, are incomplete. See also group A01N 65/00.

Project: MP0439 (A23D)

- M A23D** EDIBLE OILS OR FATS, e.g. MARGARINES, SHORTENINGS, COOKING OILS (animal feeding-stuffs [A23K 10/00](#)-[A23K 20/30](#), [A23K 30/00](#)-[A23K 50/90](#); foods or foodstuffs containing edible oils or fats [A21D](#), [A23C](#), [A23G](#), [A23L](#); obtaining, refining, preserving [C11B](#), [C11C](#); hydrogenation [C11C 3/12](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (A23F)

- M A23F** COFFEE; TEA; THEIR SUBSTITUTES; MANUFACTURE, PREPARATION, OR INFUSION THEREOF (coffee or tea pots [A47G 19/14](#); tea infusers [A47G 19/16](#); apparatus for making beverages, e.g. coffee or tea, [A47J 31/00](#); coffee mills [A47J 42/00](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0295-F (A23L)

- M A23L 5/00** Preparation or treatment of foods or foodstuffs, in general; Food or foodstuffs obtained thereby; Materials therefor (preservation thereof in general [A23L 3/00](#))

WARNING

Group A23L 5/00 is impacted by the reclassification into groups A23L 7/00, A23L 9/00 and A23L 21/00.

Groups A23L 5/00, A23L 7/00, A23L 9/00, and A23L 21/00 should be considered in order to perform a complete search.

- M A23L 7/00** Cereal-derived products; Malt products (malt products of pulses [A23L 11/20](#)); Preparation or treatment thereof (preparation of malt for brewing [C12C](#))

WARNING

Group A23L 7/00 is incomplete pending reclassification of documents from group A23L 5/00.

Groups A23L 5/00 and A23L 7/00 should be considered in order to perform a complete search.

M	A23L 9/00	Puddings; Cream substitutes; Preparation or treatment thereof <u>WARNING</u> Group A23L 9/00 is incomplete pending reclassification of documents from group A23L 5/00. Groups A23L 5/00 and A23L 9/00 should be considered in order to perform a complete search.
M	A23L 21/00	Marmalades, jams, jellies or the like; Products from apiculture; Preparation or treatment thereof <u>WARNING</u> Group A23L 21/00 is incomplete pending reclassification of documents from group A23L 5/00. Groups A23L 5/00 and A23L 21/00 should be considered in order to perform a complete search.
U	A23L 29/00	Foods or foodstuffs containing additives (containing additives for modifying the nutritive qualities A23L 33/10; containing substantially indigestive additives, e.g. dietary fibres, A23L 33/21); Preparation or treatment thereof
M	A23L 29/30	<ul style="list-style-type: none"> containing carbohydrate syrups; containing sugars; containing sugar alcohols, e.g. xylitol; containing starch hydrolysates, e.g. dextrin (A23L 21/20 takes precedence; artificial sweetening agents A23L 27/30) <u>WARNING</u> Group A23L 29/30 is impacted by reclassification into group A23L 33/125. Groups A23L 29/30 and A23L 33/125 should be considered in order to perform a complete search.
M	A23L 31/00	Edible extracts or preparations of fungi; Preparation or treatment thereof <u>WARNING</u> Group A23L 31/00 is impacted by reclassification into groups A23L 31/10 and A23L 31/15. Groups A23L 31/00, A23L 31/10 and A23L 31/15 should be considered in order to perform a complete search.
M	A23L 31/10	<ul style="list-style-type: none"> Yeasts or derivatives thereof <u>WARNING</u> Group A23L 31/10, is incomplete pending reclassification of documents from group A23L 31/00. Groups A23L 31/00 and A23L 31/10 should be considered in order to perform a complete search.
M	A23L 31/15	<ul style="list-style-type: none"> Extracts <u>WARNING</u> Group A23L 31/15 is incomplete pending reclassification of documents from group A23L 31/00. Groups A23L 31/00 and A23L 31/15 should be considered in order to perform a complete search.
U	A23L 33/00	Modifying nutritive qualities of foods; Dietetic products; Preparation or treatment thereof
U	A23L 33/10	<ul style="list-style-type: none"> using additives (A23L 33/21 takes precedence)

- M A23L 33/125
- containing carbohydrate syrups; containing sugars; containing sugar alcohols; containing starch hydrolysates (indigestible substances [A23L 33/21](#))

WARNING

Group A23L 33/125 is incomplete pending reclassification of documents from group A23L 29/30.

Groups A23L 29/30 and A23L 33/125 should be considered in order to perform a complete search.

Project: RP0506-F (A41D)

- U A41D 1/00 **Garments (for children [A41D 11/00](#))**

U A41D 1/06

- Trousers

M A41D 1/08

- specially adapted for sporting purposes

WARNING

Group A41D 1/08 is impacted by reclassification into groups A41D 1/085 and A41D 1/089.

Groups A41D 1/08, A41D 1/085 and A41D 1/089 should be considered in order to perform a complete search.

M A41D 1/085

- for playing golf

WARNING

Group A41D 1/085 is incomplete pending reclassification of documents from group A41D 1/08.

Groups A41D 1/08 and A41D 1/085 should be considered in order to perform a complete search.

M A41D 1/089

- Shorts

WARNING

Group A41D 1/089 is incomplete pending reclassification of documents from group A41D 1/08.

Groups A41D 1/08 and A41D 1/089 should be considered in order to perform a complete search.

Project: RP0128 (A44B)

- U A44B 19/00 **Slide fasteners**

U A44B 19/24

- Details

U A44B 19/26

- Sliders

A44B 19/267

- {for slide fasteners with edges of stringers having uniform section throughout the length thereof (for sacks or bags ~~B65D 33/2591~~ [B65D 33/2508](#))}

Project: MP0439 (A45B)

M A45B

WALKING STICKS (walking aids, e.g. sticks, for blind persons [A61H 3/06](#)); UMBRELLAS; LADIES' OR LIKE FANS (cane or umbrella stands or holders [A47G 25/12](#))

NOTE

In this subclass, the following term is used with the meaning indicated:

- "umbrellas" also covers sunshades similar in construction to umbrellas

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (A45C)**M A45C****PURSES; LUGGAGE; HAND CARRIED BAGS**NOTES

1. In this subclass, the following term is used with the meaning indicated:
 - "luggage" means containers for personal belongings for a journey, e.g. travelling bags, suitcases, trunks.
2. In this subclass, the following terms are used with the meaning indicated:
 - "flexible" means providing a structure with no considerable resistance against deformation or decrease of the enclosed volume, whereby a two-dimensional stability may be provided, e.g. by a stiffened bottom
 - "semi-rigid" means providing a structure with three-dimensional stability in an unloaded state and resilient resistance against deformation, or allowing a limited decrease, of the enclosed volume, e.g. by a resilient frame or a rigid frame with flexible side walls
 - "rigid" means providing a structure with three-dimensional stability allowing no deformation leading to a considerable decrease of the enclosed volume
 - "collapsible" means providing a feature other than use of flexible material for reducing the dimensions of flexible luggage or the enclosed volume of semi-rigid or rigid luggage
 - "extensible" means providing a feature other than use of flexible material for increasing the enclosed volume of flexible, semi-rigid or rigid luggage

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0073-F (A47B)**U A47B 3/00**

Folding or stowable tables (folded and suspended or hinged, or wall tables [A47B 5/04](#))

M A47B 3/06

- with separable parts

WARNING

Group A47B 3/06 is impacted by reclassification into group A47B 3/063. Groups A47B 3/06 and A47B 3/063 should be considered in order to perform a complete search.

M A47B 3/063

- {combined with seats}

WARNING

Group A47B 3/063 is incomplete pending reclassification of documents from groups A47B 3/06 and A47B 83/02. Groups A47B 3/063, A47B 3/06, and A47B 83/02 should be considered in order to perform a complete search.

M A47B 3/14

- Foldable table and seat units

WARNING

Group A47B 3/14 is incomplete pending reclassification of documents from group A47B 83/02. Groups A47B 3/14 and A47B 83/02 should be considered in order to perform a complete search.

M A47B 39/00	School forms; Benches or forms combined with desks {(table tops supported by the chair, e.g. arm-rest tables A47C 7/68)}
	<p>WARNING</p> <p>Group A47B 39/00 is incomplete pending reclassification of documents from group A47B 83/02. Groups A47B 39/00 is also impacted by reclassification into group A47C 7/68.</p> <p>Groups A47B 83/02, A47B 39/00, and A47C 7/68 should be considered in order to perform a complete search.</p>
M A47B 39/02	<ul style="list-style-type: none"> Adjustable forms <p>WARNING</p> <p>Group A47B 39/02 is impacted by reclassification into group A47B 39/023. Groups A47B 39/02 and A47B 39/023 should be considered in order to perform a complete search.</p>
M A47B 39/023	<ul style="list-style-type: none"> {with adjustable spacing between table and chair} <p>WARNING</p> <p>Group A47B 39/023 is incomplete pending reclassification of documents from group A47B 39/02.</p> <p>Groups A47B 39/02 and A47B 39/023 should be considered in order to perform a complete search.</p>
U A47B 83/00	Combinations comprising two or more pieces of furniture of different kinds
M A47B 83/02	<ul style="list-style-type: none"> Tables combined with seats {(folding or stowable tables with separable parts combined with seats A47B 3/063; foldable table and seat units A47B 3/14)} <p>WARNING</p> <p>Group A47B 83/02 is impacted by reclassification into groups A47B 3/063, A47B 3/14, A47B 39/00, A47B 83/021, A47B 83/0213, A47B 83/0215, A47B 83/023, and A47B 83/024.</p> <p>All groups listed in this Warning should be considered in order to perform a complete search.</p>
M A47B 83/021	<ul style="list-style-type: none"> {with seats stowable beneath table top} <p>WARNING</p> <p>Groups A47B 83/021 – A47B 83/0215 are incomplete pending reclassification of documents from group A47B 83/02.</p> <p>Groups A47B 83/02 and A47B 83/021 – A47B 83/0215 should be considered in order to perform a complete search.</p>
M A47B 83/023	<ul style="list-style-type: none"> {Booth-type arrangements} <p>WARNING</p> <p>Group A47B 83/023 is incomplete pending reclassification of documents from group A47B 83/02.</p> <p>Groups A47B 83/02 and A47B 83/023 should be considered in order to perform a complete search.</p>
M A47B 83/024	<ul style="list-style-type: none"> {having opposed benches without backs, e.g. of the picnic type} <p>WARNING</p> <p>Group A47B 83/024 is incomplete pending reclassification of documents from group A47B 83/02.</p> <p>Groups A47B 83/02 and A47B 83/024 should be considered in order to perform a complete search.</p>

Project: N/A (A47B)

- U A47B 88/00 **Drawers for tables, cabinets or like furniture; Guides for drawers ([A47B 63/02](#) takes precedence; drawers coupled to doors [A47B 96/16](#))**

WARNING

Group [A47B 88/00](#) is impacted by reclassification into groups [A47B 88/90](#), [A47B 88/969](#), [A47B 88/981](#), [A47B 88/988](#), and [A47B 88/994](#).



All groups listed in this Warning should be considered in order to perform a complete search.

- U A47B 88/90 • Constructional details of drawers

WARNING

Group [A47B 88/90](#) is incomplete pending reclassification of documents from group [A47B 88/00](#). Group [A47B 88/90](#) is also impacted by reclassification into groups [A47B 88/969](#), [A47B 88/981](#), [A47B 88/988](#), and [A47B 88/994](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U A47B 88/919 • • Accessories or additional elements for drawers, e.g. drawer lighting (drawers having organising or sorting means [A47B 88/969](#))
- U A47B 88/931 • • • Rails or rods mounted above the drawer walls, e.g. for stabilisation of the drawer or for suspension of the content
- U A47B 88/938 • • • • Means for connecting rails or rods to drawers
- A47B 2088/939 • • •  {to the front panel of a drawer}
- A47B 2088/94 • • •  {to the back wall of a drawer}

Project: RP0073-F (A47C)

- U A47C 7/00 **Parts, details, or accessories of chairs or stools (attaching to floor [A47B 91/08](#))**

- U A47C 7/62 • Accessories for chairs

WARNING

Group [A47C 7/62](#) is impacted by reclassification into groups [A47C 7/622](#), [A47C 7/624](#), [A47C 7/626](#) and [A47C 7/628](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M A47C 7/68 • • Arm-rest tables {; or back-rest tables}

WARNING

Group A47C 7/68 is incomplete pending reclassification of documents from group A47B 39/00.

Group A47C 7/68 is also impacted by reclassification into groups [A47C 7/622](#), [A47C 7/624](#), [A47C 7/626](#) and [A47C 7/628](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Group A47C 7/68 is impacted by reclassification into groups [A47C 7/622](#), [A47C 7/624](#), [A47C 7/626](#) and [A47C 7/628](#).
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0074-F (A47D)

- U A47D 1/00 **Children's chairs (chairs generally [A47C](#))**

M	A47D 1/008	<ul style="list-style-type: none"> • {with trays (combinations of chairs and tables A47B 83/02; children's chairs combined with tables A47D 3/00)} <p>WARNING Group A47D 1/008 is impacted by reclassification into groups A47D 1/0081, A47D 1/0083 and A47D 1/0085. Groups A47D 1/008 and A47D 1/0081, A47D 1/0083 and A47D 1/0085 should be considered in order to perform a complete search.</p>
M	A47D 1/0081	<ul style="list-style-type: none"> • {adjustable} <p>WARNING Group A47D 1/0081 is incomplete pending reclassification of documents from group A47D 1/008. Groups A47D 1/008 and A47D 1/0081 should be considered in order to perform a complete search.</p>
M	A47D 1/0083	<ul style="list-style-type: none"> • {movable to inoperative position} <p>WARNING Group A47D 1/0083 is incomplete pending reclassification of documents from group A47D 1/008. Groups A47D 1/008 and A47D 1/0083 should be considered in order to perform a complete search.</p>
M	A47D 1/0085	<ul style="list-style-type: none"> • {removable} <p>WARNING Group A47D 1/0085 is incomplete pending reclassification of documents from group A47D 1/008. Groups A47D 1/008 and A47D 1/0085 should be considered in order to perform a complete search.</p>
M	A47D 1/02	<ul style="list-style-type: none"> • Foldable chairs {(foldable rocking-chairs A47D 13/10)} <p>WARNING Group A47D 1/02 is impacted by reclassification into group A47D 1/023. Groups A47D 1/02 and A47D 1/023 should be considered in order to perform a complete search.</p>
M	A47D 1/023	<ul style="list-style-type: none"> • {of high chair type} <p>WARNING Group A47D 1/023 is incomplete pending reclassification of documents from group A47D 1/02. Groups A47D 1/02 and A47D 1/023 should be considered in order to perform a complete search.</p>
M	A47D 3/00	<p>Children's tables {(school forms A47B 39/00; school desks or tables A47B 41/00)}</p> <p>WARNING Group A47D 3/00 is impacted by reclassification into group A47D 3/001. Group A47D 3/00 and A47D 3/001 should be considered in order to perform a complete search.</p>
M	A47D 3/001	<ul style="list-style-type: none"> • {surrounding the seat} <p>WARNING Group A47D 3/001 is incomplete pending reclassification of documents from group A47D 3/00.</p>

Groups A47D 3/00 and A47D 3/001 should be considered in order to perform a complete search.

Project: MP0466 (A47J)

- U A47J 37/00 Baking; Roasting; Grilling; Frying (bakers' ovens, non-domestic baking apparatus or equipment [A21B](#); domestic stoves or ranges [F24B](#), [F24C](#))
- U A47J 37/06
 - Roasters; Grills; Sandwich grills
- U A47J 37/0623
 - {Small-size cooking ovens, i.e. defining an at least partially closed cooking cavity ([A47J 37/0605](#) takes precedence; barbecues [A47J 37/07](#))}
- U A47J 37/0629
 - • {with electric heating elements}
- M A47J 37/0641
 - • • {with forced air circulation, *e.g. air fryers*}
- M A47J 37/12
 - Deep fat fryers, including apparatus specially adapted for frying fish {(frying under pressure [A47J 27/0817](#); devices for withdrawing or condensing frying vapours [A47J 36/38](#); *small-size ovens with forced air circulation, e.g. air fryers, A47J 37/0641*)}

Project: RP0296-F (A61B)

- U A61B 5/00 Detecting, measuring or recording for diagnostic purposes (radiation diagnosis [A61B 6/00](#); diagnosis by ultrasonic, sonic or infrasonic waves [A61B 8/00](#)); Identification of persons
- M A61B 5/117
 - Identification of persons (methods or arrangements for recognising patterns, e.g. fingerprints, [G06K 9/00](#); identification of persons by analysing their voice or speech [G10L 17/00](#))

WARNING
Group A61B 5/117 is impacted by reclassification into group A61B 5/1171. Groups A61B 5/117 and A61B 5/1171 should be considered in order to perform a complete search.
- M A61B 5/1171
 - • based on the shapes or appearances of their bodies or parts thereof

WARNING
Group A61B 5/1171 is incomplete pending reclassification of documents from group A61B 5/117. Groups A61B 5/117 and A61B 5/1171 should be considered in order to perform a complete search.

Project: RP0140-F (A61B)

- M A61B 5/16
 - Devices for psychotechnics (using teaching or educational appliances [G09B 1/00](#) - [G09B 7/00](#)); Testing reaction times {; Devices for evaluating the psychological state}

WARNING
Group A61B 5/16 is impacted by reclassification into group A61B 5/163. Groups A61B 5/16 and A61B 5/163 should be considered in order to perform a complete search.
- M A61B 5/163
 - • {by tracking eye movement, gaze, or pupil change}

WARNING
Group A61B 5/163 is incomplete pending reclassification of documents from group A61B 5/16. Groups A61B 5/16 and A61B 5/163 should be considered in order to perform a complete search.

Project: RP0076-F (A61B)

- U A61B 5/68 • {Arrangements of detecting, measuring or recording means, e.g. sensors, in relation to patient}
- U A61B 5/6801 • • {specially adapted to be attached to or worn on the body surface}
- U A61B 5/683 • • • {Means for maintaining contact with the body ([A61B 5/6802](#) takes precedence)}
- M A61B 5/6832 • • • • {using adhesives ([A61B 5/04087](#) takes precedence)}

WARNING

Group A61B 5/6832 is impacted by reclassification into group A61B 5/68335.
Groups A61B 5/6832 and A61B 5/68335 should be considered in order to perform a complete search.

- M A61B 5/68335 • • • • • {including release sheets or liners}

WARNING

Group A61B 5/68335 is incomplete pending reclassification of documents from group A61B 5/6832.
Groups A61B 5/6832 and A61B 5/68335 should be considered in order to perform a complete search.

Project: MP0301 (A61B)

- U A61B 8/00 **Diagnosis using ultrasonic, sonic or infrasonic waves (imaging of objects using sonar [G01S 15/00](#))**

- M A61B 8/40 • {Positioning of patients, e.g. means for holding or immobilising parts of the patient's body}

WARNING

This subgroup is not complete pending a reorganisation, see A61B 8/00

- M A61B 8/42 • {Details of probe positioning or probe attachment to the patient}

WARNING

This subgroup is not complete pending a reorganisation, see A61B 8/00

- M A61B 8/44 • {Constructional features of the ultrasonic, sonic or infrasonic diagnostic device}

WARNING

This subgroup is not complete pending a reorganisation, see A61B 8/00

- U A61B 8/4444 • • {related to the probe}

- M A61B 8/445 • • • {Details of catheter construction}

WARNING

This subgroup is not complete pending a reorganisation, see A61B 8/12

- M A61B 8/46 • {Ultrasonic, sonic or infrasonic diagnostic devices with special arrangements for interfacing with the operator or the patient}

WARNING

This subgroup is not complete pending a reorganisation, see A61B 8/00

- M A61B 8/48 • {Diagnostic techniques ([A61B 8/13](#) takes precedence)}

WARNING

This subgroup is not complete pending a reorganisation, see A61B 8/08

- M A61B 8/52 • {Devices using data or image processing specially adapted for diagnosis using ultrasonic, sonic or infrasonic waves (image processing [per se G06T](#))}
- WARNING**
This subgroup is not complete pending a reorganisation, see A61B 8/08 and A61B 8/14
- M A61B 8/56 • {Details of data transmission or power supply}
- WARNING**
This subgroup is not complete pending a reorganisation, see A61B 8/00
- M A61B 8/58 • {Testing, adjusting or calibrating the diagnostic device}
- WARNING**
This subgroup is not complete pending a reorganisation, see A61B 8/00

Project: RP0123-F (A61B)

- U A61B 17/00 **Surgical instruments, devices or methods, e.g. tourniquets ([A61B 18/00](#) takes precedence; contraceptive devices, pessaries, or applicators therefor [A61F 6/00](#); eye surgery [A61F 9/007](#); ear surgery [A61F 11/00](#))**
- U A61B 17/32 • Surgical cutting instruments {([A61B 18/042](#) takes precedence; suture cutters [A61B 17/0467](#); instruments for ligaturing or cutting [A61B 17/128](#); instruments for rupturing the amniotic membrane [A61B 17/4208](#); specially adapted knives for eye surgery [A61F 9/0133](#))}
- M A61B 17/320068 • • {using mechanical vibrations, e.g. ultrasonic ([A61B 17/22012](#) takes precedence; dental tooth drilling devices operated by vibration [A61C 3/03](#); removing intra-ocular material using mechanical vibrations [A61F 9/00745](#))}
- WARNING**
Group A61B-17/320068 is impacted by reclassification into groups A61B 2017/320069, A61B 2017/32007, A61B 2017/320071, and A61B 2017/320082, A61B 2017/320089, and A61B 2017/32009. All groups listed in this Warning should be considered in order to perform a complete search..
- M A61B 2017/320069 • • • {for ablating tissue}
- WARNING**
Group A61B-2017/320069 is incomplete pending reclassification of documents from group A61B-17/320068. Groups A61B-17/320068 and A61B-2017/320069 should be considered in order to perform a complete search.
- M A61B 2017/32007 • • • {with suction or vacuum means}
- WARNING**
Group A61B-2017/32007 is incomplete pending reclassification of documents from group A61B-17/320068. Groups A61B-17/320068 and A61B-2017/32007 should be considered in order to perform a complete search.
- M A61B 2017/320071 • • • {with articulating means for working tip}
- WARNING**
Group A61B-2017/320071 is incomplete pending reclassification of documents from group A61B-17/320068. Groups A61B-17/320068 and A61B-2017/320071 should be considered in order to perform a complete search.

M	A61B 2017/320072	• • • {Working tips with special features, e.g. extending parts}	<p><u>WARNING</u></p> <p>Group A61B 2017/320072 is impacted by reclassification into groups A61B 2017/320073, A61B 2017/320074, A61B 2017/320075, and A61B 2017/320077.</p> <p>All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61B 2017/320073	• • • {probe}	<p><u>WARNING</u></p> <p>Group A61B 2017/320073 is incomplete pending reclassification of documents from group A61B 2017/320072.</p> <p>Groups A61B 2017/320072 and A61B 2017/320073 should be considered in order to perform a complete search.</p>
M	A61B 2017/320074	• • • {blade}	<p><u>WARNING</u></p> <p>Group A61B 2017/320074 is incomplete pending reclassification of documents from group A61B 2017/320072.</p> <p>Groups A61B 2017/320072 and A61B 2017/320074 should be considered in order to perform a complete search.</p>
M	A61B 2017/320075	• • • • {single edge blade, e.g. for cutting}	<p><u>WARNING</u></p> <p>Group A61B 2017/320075 is incomplete pending reclassification of documents from group A61B 2017/320072.</p> <p>Groups A61B 2017/320072 and A61B 2017/320075 should be considered in order to perform a complete search.</p>
M	A61B 2017/320077	• • • • {double edge blade, e.g. reciprocating}	<p><u>WARNING</u></p> <p>Group A61B 2017/320077 is incomplete pending reclassification of documents from group A61B 2017/320072.</p> <p>Groups A61B 2017/320072 and A61B 2017/320077 should be considered in order to perform a complete search.</p>
M	A61B 2017/320082	• • • {for incising tissue}	<p><u>WARNING</u></p> <p>Group A61B 2017/320082 is incomplete pending reclassification of documents from group A61B 17/320068.</p> <p>Groups A61B 17/320068 and A61B 2017/320082 should be considered in order to perform a complete search.</p>
M	A61B 2017/320089	• • • {node location}	<p><u>WARNING</u></p> <p>Group A61B 2017/320089 is incomplete pending reclassification of documents from group A61B 2017/320088.</p> <p>Groups A61B 2017/320088 and A61B 2017/320089 should be considered in order to perform a complete search.</p>
M	A61B 2017/32009	• • • • {node at distal end of cutting means}	<p><u>WARNING</u></p> <p>Group A61B 2017/32009 is incomplete pending reclassification of documents from group A61B 17/320068.</p>

Groups A61B 17/320068 and A61B 2017/32009 should be considered in order to perform a complete search.

- M A61B 17/320092 . . . {with additional movable means for clamping or cutting tissue, e.g. with a pivoting jaw}

WARNING

Group A61B 17/320092 is impacted by reclassification into groups A61B 2017/320093, A61B 2017/320094, A61B 2017/320095, and A61B 2017/320097.

All groups listed in this Warning should be considered in order to perform a complete search.

- M A61B 2017/320093 . . . {additional movable means performing cutting operation}

WARNING

Group A61B 2017/320093 is incomplete pending reclassification of documents from group A61B 17/320092.

Groups A61B 17/320092 and A61B 2017/320093 should be considered in order to perform a complete search.

- M A61B 2017/320094 . . . {additional movable means performing clamping operation}

WARNING

Group A61B 2017/320094 is incomplete pending reclassification of documents from group A61B 17/320092.

Groups A61B 17/320092 and A61B 2017/320094 should be considered in order to perform a complete search.

- M A61B 2017/320095 . . . {with sealing or cauterizing means}

WARNING

Group A61B 2017/320095 is incomplete pending reclassification of documents from group A61B 17/320092.

Groups A61B 17/320092 and A61B 2017/320095 should be considered in order to perform a complete search.

- M A61B 2017/320097 . . . {with stapling means}

WARNING

Group A61B 2017/320097 is incomplete pending reclassification of documents from group A61B 17/320092.

Groups A61B 17/320092 and A61B 2017/320097 should be considered in order to perform a complete search.

Project: RP0018-F (A61B)

- U A61B 18/00 Surgical instruments, devices or methods for transferring non-mechanical forms of energy to or from the body (eye surgery [A61F 9/007](#); ear surgery [A61F 11/00](#))

- U A61B 18/18 . . by applying electromagnetic radiation, e.g. microwaves (radiation therapy [A61N 5/00](#))

- U A61B 18/20 . . using laser

- U A61B 2018/2015 . . . {Miscellaneous features}

- M A61B 2018/202 . . . {Laser enclosed in a hand-piece}

WARNING

Group A61B 2018/202 is impacted by reclassification into group A61B 2018/2023.

		Groups A61B 2018/202 and A61B 2018/2023 should be considered in order to perform a complete search.
M	A61B 2018/2023	<ul style="list-style-type: none"> • • • • {Self-contained devices, i.e. with power supply in the hand-piece} <p>WARNING Group A61B 2018/2023 is incomplete pending reclassification of documents from group A61B 2018/202. Groups A61B 2018/202 and A61B 2018/2023 should be considered in order to perform a complete search.</p>
M	A61B 2018/2035	<ul style="list-style-type: none"> • • • {Beam shaping or redirecting; Optical components therefor (A61B 2018/2255 takes precedence)} <p>WARNING Group A61B 2018/2035 is impacted by reclassification into groups A61B 2018/20361, A61B 2018/20553, A61B 2018/20554, A61B 2018/205545, and A61B 2018/205547. Groups A61B 2018/2035, A61B 2018/20361, A61B 2018/20553, A61B 2018/20554, A61B 2018/205545, and A61B 2018/205547 should be considered in order to perform a complete search.</p>
M	A61B 2018/20351	<ul style="list-style-type: none"> • • • • {Scanning mechanisms} <p>WARNING Group A61B 2018/20351 is impacted by reclassification into groups A61B 2018/20353 and A61B 2018/20355. Groups A61B 2018/20351, A61B 2018/20353 and A61B 2018/20355 should be considered in order to perform a complete search.</p>
M	A61B 2018/20353	<ul style="list-style-type: none"> • • • • • {Scanning in three dimensions [3D]} <p>WARNING Group A61B 2018/20353 is incomplete pending reclassification of documents from group A61B 2018/20351. Groups A61B 2018/20353 and A61B 2018/20351 should be considered in order to perform a complete search.</p>
M	A61B 2018/20355	<ul style="list-style-type: none"> • • • • • {Special scanning path or conditions, e.g. spiral, raster or providing spot overlap} <p>WARNING Group A61B 2018/20355 is incomplete pending reclassification of documents from group A61B 2018/20351. Groups A61B 2018/20355 and A61B 2018/20351 should be considered in order to perform a complete search.</p>
M	A61B 2018/20361	<ul style="list-style-type: none"> • • • • {with redirecting based on sensed condition, e.g. tissue analysis or tissue movement} <p>WARNING Group A61B 2018/20361 is incomplete pending reclassification of documents from group A61B 2018/2035. Groups A61B 2018/20361 and A61B 2018/2035 should be considered in order to perform a complete search.</p>
M	A61B 2018/20553	<ul style="list-style-type: none"> • • • • {with special lens or reflector arrangement (A61B 2018/2255, A61B 2018/2261, A61B 2018/2266, A61B 2018/2272, A61B 2018/2277, A61B 2018/2283 take precedence)} <p>WARNING Group A61B 2018/20553 is incomplete pending reclassification of documents from group A61B 2018/2035.</p>

			Groups A61B 2018/20553 and A61B 2018/2035 should be considered in order to perform a complete search.
M	A61B 2018/20554	. . .	<p>{Arrangements for particular intensity distribution, e.g. tophat}</p> <p><u>WARNING</u> Group A61B 2018/20554 is incomplete pending reclassification of documents from group A61B 2018/2035. Groups A61B 2018/20554 and A61B 2018/2035 should be considered in order to perform a complete search.</p>
M	A61B 2018/205545	. . .	<p>{Arrangements for particular spot shape, e.g. square or annular}</p> <p><u>WARNING</u> Group A61B 2018/205545 is incomplete pending reclassification of documents from group A61B 2018/2035. Groups A61B 2018/205545 and A61B 2018/2035 should be considered in order to perform a complete search.</p>
M	A61B 2018/205547	. . .	<p>{Controller with specific architecture or programmatic algorithm for directing scan path, spot size or shape, or spot intensity, fluence or irradiance}</p> <p><u>WARNING</u> Group A61B 2018/205547 is incomplete pending reclassification of documents from group A61B 2018/2035. Groups A61B 2018/205547 and A61B 2018/2035 should be considered in order to perform a complete search.</p>
M	A61B 18/22	. . .	<p>the beam being directed along or through a flexible conduit, e.g. an optical fibre; {Couplings or} hand-pieces therefor</p> <p><u>WARNING</u> Group A61B 18/22 is impacted by reclassification into groups A61B 18/22 and A61B 2018/2247. Groups A61B 18/22 and A61B 2018/2247 should be considered in order to perform a complete search.</p>
M	A61B 2018/2247	. . .	<p>{Fibre breakage detection}</p> <p><u>WARNING</u> Group A61B 2018/2247 is incomplete pending reclassification of documents from group A61B 18/22. Groups A61B 18/22 and A61B 2018/2247 should be considered in order to perform a complete search.</p>
M	A61B 2018/225	. . .	<p>{Features of hand-pieces (A61B 2018/2255 takes precedence)}</p> <p><u>WARNING</u> Group A61B 2018/225 is impacted by reclassification into group A61B 2018/2253. Groups A61B 2018/225 and A61B 2018/2253 should be considered in order to perform a complete search.</p>
M	A61B 2018/2253	. . .	<p>{characterised by additional functions, e.g. surface cooling or detecting pathological tissue}</p> <p><u>WARNING</u> Group A61B 2018/2253 is incomplete pending reclassification of documents from group A61B 2018/225. Groups A61B 2018/2253 and A61B 2018/225 should be considered in order to perform a complete search.</p>

- M A61B 2018/2255 • • • {Optical elements at the distal end of probe tips}
- WARNING
Group A61B 2018/2255 is impacted by reclassification into groups A61B 2018/2285 and A61B 2018/22853.
Groups A61B 2018/2255, A61B 2018/2285 and A61B 2018/22853 should be considered in order to perform a complete search.
- M A61B 2018/2285 • • • {with removable, replacable, or exchangeable tips}
- WARNING
Group A61B 2018/2285 is incomplete pending reclassification of documents from group A61B 2018/2255.
Groups A61B 2018/2285 and A61B 2018/2255 should be considered in order to perform a complete search.
- M A61B 2018/22853 • • • • {Means to identify tip configuration}
- WARNING
Group A61B 2018/22853 is incomplete pending reclassification of documents from group A61B 2018/2255.
Groups A61B 2018/22853 and A61B 2018/2255 should be considered in order to perform a complete search.

Project: RP0296-F (A61B)

- M A61B 42/00 **Surgical gloves; Finger-stalls specially adapted for surgery; Devices for handling or treatment thereof**
- WARNING
Group A61B 42/00 is impacted by reclassification into group A61B 42/10.
Groups A61B 42/00 and A61B 42/10 should be considered in order to perform a complete search.
- M A61B 42/10 • Surgical gloves
- WARNING
Group A61B 42/10 is incomplete pending reclassification of documents from group A61B 42/00.
Groups A61B 42/00 and A61B 42/10 should be considered in order to perform a complete search.
- U A61B 50/00 **Containers, covers, furniture or holders specially adapted for surgical or diagnostic appliances or instruments, e.g. sterile covers (drapes specially adapted for instruments [A61B 46/10](#))**
- U A61B 50/20 • Holders specially adapted for surgical or diagnostic appliances or instruments (drapes with means to hold surgical instruments [A61B 46/23](#); for catheters [A61M 25/02](#))
- M A61B 50/24 • • Stands (Mayo stands [A61B 50/15](#))
- WARNING
Group A61B 50/24 is impacted by reclassification into groups A61B 50/26 and A61B 50/28.
Groups A61B 50/24, A61B 50/26 and A61B 50/28 should be considered in order to perform a complete search.
- M A61B 50/26 • • floor-based
- WARNING
Group A61B 50/26 is incomplete pending reclassification of documents from group A61B 50/24.

Groups A61B 50/24, A61B 50/26 and A61B 50/28 should be considered in order to perform a complete search.

M A61B 50/28

- • suspended from the ceiling

WARNING

Group A61B 50/28 is incomplete pending reclassification of documents from group A61B 50/24.

Groups A61B 50/24, A61B 50/26 and A61B 50/28 should be considered in order to perform a complete search.

U A61B 90/00

Instruments, implements or accessories specially adapted for surgery or diagnosis and not covered by any of the groups [A61B 1/00](#) - [A61B 50/00](#), e.g. for luxation treatment or for protecting wound edges (protective face masks [A41D 13/11](#); surgeon's or patient's gowns or dresses [A41D 13/12](#); devices for carrying-off, for treatment of, or for carrying-over, body liquids [A61M 1/00](#))

M A61B 90/20

- Surgical microscopes characterised by non-optical aspects

WARNING

Group A61B 90/20 is impacted by reclassification into group A61B 90/25.

Groups A61B 90/20 and A61B 90/25 should be considered in order to perform a complete search.

M A61B 90/25

- • Supports therefor

WARNING

Group A61B 90/25 is incomplete pending reclassification of documents from group A61B 90/20.

Groups A61B 90/20 and A61B 90/25 should be considered in order to perform a complete search.

M A61B 90/30

- Devices for illuminating a surgical field, the devices having an interrelation with other surgical devices or with a surgical procedure

WARNING

Group A61B 90/30 is impacted by reclassification into group A61B 90/35.

Groups A61B 90/30 and A61B 90/35 should be considered in order to perform a complete search.

M A61B 90/35

- • Supports therefor

WARNING

Group A61B 90/35 is incomplete pending reclassification of documents from group A61B 90/30.

Groups A61B 90/30 and A61B 90/35 should be considered in order to perform a complete search.

Project: RP0076-F (A61B)

U A61B 2562/00

Details of sensors; Constructional details of sensor housings or probes; Accessories for sensors

U A61B 2562/02

- Details of sensors specially adapted for in-vivo measurements

M A61B 2562/0209

- • Special features of electrodes classified in [A61B 5/04001](#), [A61B 5/0408](#), [A61B 5/042](#), [A61B 5/0478](#), [A61B 5/0492](#) or [A61B 5/053](#)

WARNING

Group A61B 2562/0209 is impacted by reclassification into groups A61B 2562/0215 and A61B 2562/0217.

Groups A61B 2562/0209, A61B 2562/0215, and A61B 2562/0217 should be considered in order to perform a complete search.

- | | | |
|---|----------------|---|
| M | A61B 2562/0215 | <ul style="list-style-type: none">• • Silver or silver chloride containing <p><u>WARNING</u>
Group A61B 2562/0215 is incomplete pending reclassification of documents from group A61B 2562/0209.
Groups A61B 2562/0209 and A61B 2562/0215 should be considered in order to perform a complete search.</p> |
| M | A61B 2562/0217 | <ul style="list-style-type: none">• • Electrolyte containing <p><u>WARNING</u>
Group A61B 2562/0217 is incomplete pending reclassification of documents from group A61B 2562/0209.
Groups A61B 2562/0209 and A61B 2562/0217 should be considered in order to perform a complete search.</p> |
| M | A61B 2562/16 | <ul style="list-style-type: none">• Details of sensor housings or probes; Details of structural supports for sensors (A61B 2560/0462 takes precedence) <p><u>WARNING</u>
Group A61B 2562/16 is impacted by reclassification into group A61B 2562/17.
Groups A61B 2562/16 and A61B 2562/17 should be considered in order to perform a complete search.</p> |
| M | A61B 2562/17 | <ul style="list-style-type: none">• • Comprising radiolucent components <p><u>WARNING</u>
Group A61B 2562/17 is incomplete pending reclassification of documents from group A61B 2562/16.
Groups A61B 2562/16 and A61B 2562/17 should be considered in order to perform a complete search.</p> |

Project: RP0410-F (A61C)

- | | | |
|---|------------|--|
| M | A61C 5/00 | <p>Filling or capping teeth</p> <p><u>WARNING</u>
Group A61C 5/00 is impacted by reclassification into group A61C 5/30.
Groups A61C 5/00 and A61C 5/30 should be considered in order to perform a complete search.</p> |
| M | A61C 5/007 | <ul style="list-style-type: none">• {Dental splints; teeth or jaw immobilisation devices; stabilizing retainers bonded to teeth after orthodontic treatments} <p><u>WARNING</u>
Group A61C 5/007 is impacted by reclassification into group A61C 5/30.
Groups A61C 5/007 and A61C 5/30 should be considered in order to perform a complete search.</p> |
| M | A61C 5/30 | <ul style="list-style-type: none">• Securing inlays, onlays or crowns <p><u>WARNING</u>
Group A61C 5/30 is incomplete pending reclassification of documents from groups A61C 5/00, A61C 5/007, A61C 5/70 and A61C 13/225.
All groups listed in this warning should be considered in order to perform a complete search.</p> |

M	A61C 5/35	<ul style="list-style-type: none"> • Pins; Mounting tools or dispensers therefor <p><u>WARNING</u> Group A61C 5/35 is incomplete pending reclassification of documents from group A61C 5/70. Groups A61C 5/70 and A61C 5/35 should be considered in order to perform a complete search.</p>
M	A61C 5/60	<ul style="list-style-type: none"> • Devices specially adapted for pressing or mixing capping or filling materials, e.g. amalgam presses <p><u>WARNING</u> Group A61C 5/60 is incomplete pending reclassification of documents from group A61C 19/005. Groups A61C 19/005 and A61C 5/60 should be considered in order to perform a complete search.</p>
M	A61C 5/70	<ul style="list-style-type: none"> • Tooth crowns; Making thereof <p><u>WARNING</u> Group A61C 5/70 is impacted by reclassification into groups A61C 5/30, A61C 5/35 and A61C 5/73. All groups listed in this warning should be considered in order to perform a complete search.</p>
M	A61C 5/73	<ul style="list-style-type: none"> • Composite crowns <p><u>WARNING</u> Group A61C 5/73 is incomplete pending reclassification of documents from group A61C 5/70. Groups A61C 5/70 and A61C 5/73 should be considered in order to perform a complete search.</p>
M	A61C 5/77	<ul style="list-style-type: none"> • Methods or devices for making crowns <p><u>WARNING</u> Group A61C 5/77 is incomplete pending reclassification of documents from group A61C 13/0004. Groups A61C 13/0004 and A61C 5/77 should be considered in order to perform a complete search.</p>
U	A61C 13/00	Dental prostheses; Making same (tooth crowns for capping teeth A61C 5/70; dental implants A61C 8/00)
U	A61C 13/0003	<ul style="list-style-type: none"> • {Making bridge-work, inlays, implants or the like}
M	A61C 13/0004	<ul style="list-style-type: none"> • {Computer-assisted sizing or machining of dental prostheses} <p><u>WARNING</u> Group A61C 13/0004 is impacted by reclassification into group A61C 5/77. Groups A61C 13/0004 and A61C 5/77 should be considered in order to perform a complete search.</p>
M	A61C 13/225	<ul style="list-style-type: none"> • Fastening prostheses in the mouth (securing tooth crowns in capping teeth A61C 5/30) <p><u>WARNING</u> Group A61C 13/225 is impacted by reclassification into group A61C 5/30. Groups A61C 13/225 and A61C 5/30 should be considered in order to perform a complete search.</p>
U	A61C 19/00	Dental auxiliary appliances (dental chairs or accessories therefor, working stands whether or not combined with chairs A61G 15/00)

- M A61C 19/005
- {Devices for the manual mixing of small quantities of materials, e.g. trays for mixing dental porcelain}

WARNING

Group A61C 19/005 is impacted by reclassification into group A61C 5/60.
Groups A61C 19/005 and A61C 5/60 should be considered in order to perform a complete search.

Project: RP0475 (A61F)

- U A61F 2/00
- Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents (as cosmetic articles, see the relevant subclasses, e.g. wigs, hair pieces, [A41G 3/00](#), [A41G 5/00](#), artificial nails [A45D 31/00](#); dental prostheses [A61C 13/00](#); materials for prostheses [A61L 27/00](#); artificial hearts [A61M 1/10](#); artificial kidneys [A61M 1/14](#))

- C A61F 2/01
- Filters implantable into blood vessels ~~{{filters used as gripping instruments [A61B 17/22031](#)}}~~

WARNING

Group A61F 2/01 is impacted by reclassification into groups [A61F 2/0103](#), [A61F 2/0105](#), [A61F 2/0108](#), and [A61F 2/012](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N A61F 2/0103
- {With centering means}
- WARNING**
Group [A61F 2/0103](#) is incomplete pending reclassification of documents from group [A61F 2/01](#).
Groups [A61F 2/01](#) and [A61F 2/0103](#) should be considered in order to perform a complete search.

- N A61F 2/0105
- {Open ended, i.e. legs gathered only at one side}
- WARNING**
Group [A61F 2/0105](#) is incomplete pending reclassification of documents from group [A61F 2/01](#).
Groups [A61F 2/01](#) and [A61F 2/0105](#) should be considered in order to perform a complete search.

- N A61F 2/0108
- {Both ends closed, i.e. legs gathered at both ends}
- WARNING**
Group [A61F 2/0108](#) is incomplete pending reclassification of documents from group [A61F 2/01](#).
Groups [A61F 2/01](#) and [A61F 2/0108](#) should be considered in order to perform a complete search.

- D A61F 2002/011
- {Instruments for their placement or removal}
- <administratively transferred to [A61F 2/011](#) INV>

- N A61F 2/011
- {Instruments for their placement or removal}

- N A61F 2/012
- {Multiple filtering units}

WARNING

Group [A61F 2/012](#) is incomplete pending reclassification of documents from groups [A61F 2/01](#) and [A61F 2/013](#).

Groups [A61F 2/01](#), [A61F 2/013](#), and [A61F 2/012](#) should be considered in order to perform a complete search.

C A61F 2/013

- {Distal protection devices, i.e. devices placed distally in combination with another endovascular procedure, e.g. angioplasty or **stendingstenting**}

WARNING

Group [A61F 2/013](#) is impacted by reclassification into groups [A61F 2/012](#) and [A61F 2/014](#).

Groups [A61F 2/013](#), [A61F 2/012](#), and [A61F 2/014](#) should be considered in order to perform a complete search.

N A61F 2/014

- • {Retrograde blood flow filters, i.e. device inserted against the blood flow direction}

WARNING

Group [A61F 2/014](#) is incomplete pending reclassification of documents from group [A61F 2/013](#).

Groups [A61F 2/013](#) and [A61F 2/014](#) should be considered in order to perform a complete search.

U A61F 2/02

- Prostheses implantable into the body {(closure means for urethra or rectum or for artificial body openings therefor [A61F 2/0004](#))}

C A61F 2/24

- • Heart valves {; Vascular valves, e.g. venous valves; Heart implants, e.g. passive devices for improving the function of the native valve or the heart muscle; Transmyocardial revascularisation [TMR] devices}; **Valves implantable in the body**}

WARNING

Group [A61F 2/24](#) is impacted by reclassification into group [A61F 2/2476](#).

Groups [A61F 2/24](#) and [A61F 2/2476](#) should be considered in order to perform a complete search.

U A61F 2/2475

- • {Venous valves}

N A61F 2/2476

- • {Valves implantable in the body not otherwise provided for}

WARNING

Group [A61F 2/2476](#) is incomplete pending reclassification of documents from group [A61F 2/24](#).

Groups [A61F 2/24](#) and [A61F 2/2476](#) should be considered in order to perform a complete search.

U A61F 2/95

- Instruments specially adapted for placement or removal of stents or stent-grafts

D A61F 2002/9517

- • {handle assemblies therefor}

<administratively transferred to [A61F 2/9517](#) INV>

N A61F 2/9517

- • {handle assemblies therefor}

D A61F 2002/9522

- • {Means for mounting a stent onto the placement instrument}

<administratively transferred to [A61F 2/9522](#) INV>

Q A61F 2/9522

- • {Means for mounting a stent or stent-graft onto or into a placement instrument}

WARNING

Group [A61F 2/9522](#) is impacted by reclassification into groups [A61F 2/9524](#), [A61F 2/9525](#), and [A61F 2/9526](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A61F 2/9524
- • • {Iris-type crimpers}
- WARNING
Group [A61F 2/9524](#) is incomplete pending reclassification of documents from group [A61F 2/9522](#).
Groups [A61F 2/9522](#) and [A61F 2/9524](#) should be considered in order to perform a complete search.
- N A61F 2/9525
- • • {using a funnel}
- WARNING
Group [A61F 2/9525](#) is incomplete pending reclassification of documents from group [A61F 2/9522](#).
Groups [A61F 2/9522](#) and [A61F 2/9525](#) should be considered in order to perform a complete search.
- N A61F 2/9526
- • • {using a mandrel}
- WARNING
Group [A61F 2/9526](#) is incomplete pending reclassification of documents from group [A61F 2/9522](#).
Groups [A61F 2/9522](#) and [A61F 2/9526](#) should be considered in order to perform a complete search.
- U A61F 2002/9528
- • {for retrieval of stents}
- C A61F 2/962
- • having an outer sleeve
- WARNING
Group [A61F 2/962](#) is impacted by reclassification into group [A61F 2002/9623](#).
Groups [A61F 2/962](#) and [A61F 2002/9623](#) should be considered in order to perform a complete search.
- N A61F 2002/9623
- • • {the sleeve being reinforced}
- WARNING
Group [A61F 2002/9623](#) is incomplete pending reclassification of documents from group [A61F 2/962](#).
Groups [A61F 2/962](#) and [A61F 2002/9623](#) should be considered in order to perform a complete search.
- C A61F 2/966
- • • with relative longitudinal movement between outer sleeve and prosthesis, e.g. using a push rod
- WARNING
Group [A61F 2/966](#) is impacted by reclassification into groups [A61F 2/9661](#) and [A61F 2/9662](#).
Groups [A61F 2/966](#), [A61F 2/9661](#), and [A61F 2/9662](#) should be considered in order to perform a complete search.
- N A61F 2/9661
- • • • {the proximal portion of the stent or stent-graft is released first}
- WARNING
Group [A61F 2/9661](#) is incomplete pending reclassification of documents from group [A61F 2/966](#).
Groups [A61F 2/966](#) and [A61F 2/9661](#) should be considered in order to perform a complete search.

- N A61F 2/9662 • • • {the middle portion of the stent or stent-graft is released first}
- WARNING
 Group [A61F 2/9662](#) is incomplete pending reclassification of documents from group [A61F 2/966](#).
 Groups [A61F 2/966](#) and [A61F 2/9662](#) should be considered in order to perform a complete search.

Project: MP0301 (A61H)

- U A61H 1/00 Apparatus for passive exercising ([A61H 5/00](#) takes precedence); Vibrating apparatus {(driving means for vibrating [A61H 23/00](#))}; Chiropractic devices, e.g. body impacting devices, external devices for briefly extending or aligning unbroken bones
- NOTE
 This group does not cover orthopaedic methods or devices, which are covered by group [A61F 5/00](#)
- M A61H 1/001 • {Apparatus for applying movements to the whole body}
- WARNING
~~Not complete, pending the completion of a reclassification, see also A61H 1/005~~
- U A61H 23/00 Percussion or vibration massage, e.g. using supersonic vibration; Suction-vibration massage; Massage with moving diaphragms {(apparatus for passive exercising [A61H 1/00](#); generating or transmitting mechanical vibrations in general [B06B](#))}
- M A61H 23/004 • {With mechanical drive, e.g. spring mechanism or vibrating unit being hit for starting vibration and then applied to the body of a patient}
- WARNING
~~Not complete, pending the completion of a reclassification~~
- M A61H 23/006 • {Percussion or tapping massage (hand percussion [A61H 23/06](#))}
- WARNING
~~Not complete, pending the completion of a reclassification~~

Project: RP0450 (A61J)

- C A61J 17/00 Baby-comforters; Teething rings
- WARNING
 Group [A61J 17/00](#) is impacted by reclassification into groups [A61J 17/001](#), [A61J 17/02](#), [A61J 17/10](#), [A61J 17/101](#), [A61J 17/1011](#), [A61J 17/1012](#), [A61J 17/103](#), [A61J 17/105](#), [A61J 17/107](#), [A61J 17/109](#), [A61J 17/111](#), [A61J 17/1111](#), [A61J 17/1115](#), and [A61J 17/113](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- C A61J 17/001 • {Baby-comforters}
- WARNING
 Group [A61J 17/001](#) is incomplete pending reclassification of documents from group [A61J 17/00](#).
 Group [A61J 17/001](#) is also impacted by reclassification into groups [A61J 17/10](#), [A61J 17/101](#), [A61J 17/1011](#), [A61J 17/1012](#), [A61J 17/103](#), [A61J 17/105](#), [A61J 17/107](#), [A61J 17/109](#), [A61J 17/111](#), [A61J 17/1111](#), [A61J 17/1115](#), and [A61J 17/113](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- D A61J 17/002
 - ~~{with music box}~~
 - <administratively transferred to [A61J 17/1011](#)>
- D A61J 17/003
 - ~~{with thermometer}~~
 - <administratively transferred to [A61J 17/103](#)>
- D A61J 17/005
 - ~~{with light-emitting means}~~
 - <administratively transferred to [A61J 17/1012](#)>
- D A61J 17/006
 - ~~{releasing medication}~~
 - <administratively transferred to [A61J 7/0053](#)>
- D A61J 17/007
 - ~~{mounted on soft cushions or dolls}~~
 - <administratively transferred to [A61J 17/1111](#)>
- D A61J 17/008
 - ~~{with protective shields}~~
 - <administratively transferred to [A61J 17/113](#)>
- C A61J 17/02
 - Teething rings

WARNING

Group [A61J 17/02](#) is incomplete pending reclassification of documents from group [A61J 17/00](#).

Group [A61J 17/02](#) is also impacted by reclassification into groups [A61J 17/10](#), [A61J 17/101](#), [A61J 17/1011](#), [A61J 17/1012](#), [A61J 17/103](#), [A61J 17/105](#), [A61J 17/107](#), [A61J 17/109](#), [A61J 17/111](#), [A61J 17/1111](#), [A61J 17/1115](#), and [A61J 17/113](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A61J 17/10
 - {Details; Accessories therefor}

WARNING

Group [A61J 17/10](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A61J 17/101
 - {Emitting means, e.g. for emitting sound, light, scents or flavours}

WARNING

Group [A61J 17/101](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A61J 17/1011
 - • {Emitting sound, e.g. having rattles or music boxes}

WARNING

Group [A61J 17/1011](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A61J 17/1012
 - • • {Emitting light}

WARNING

Group [A61J 17/1012](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A61J 17/103 • {Temperature sensing means}
- WARNING
Group [A61J 17/103](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N A61J 17/105 • {Nipple attachments}
- WARNING
Group [A61J 17/105](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N A61J 17/107 • {having specific orthodontic properties}
- WARNING
Group [A61J 17/107](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N A61J 17/109 • {Decorative elements}
- WARNING
Group [A61J 17/109](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N A61J 17/111 • {Holders therefor, e.g. to prevent loss or to hold in place}
- WARNING
Group [A61J 17/111](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N A61J 17/1111 • • {conjoined with soft cushions or toys}
- WARNING
Group [A61J 17/1111](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N A61J 17/1115 • • {Straps, cords or chains}
- WARNING
Group [A61J 17/1115](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.

N A61J 17/113

- • {Protective covers therefor, e.g. for protecting during disuse}

WARNING

Group [A61J 17/113](#) is incomplete pending reclassification of documents from groups [A61J 17/00](#), [A61J 17/001](#), and [A61J 17/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0470 (A61K)

U A61K 38/00

Medicinal preparations containing peptides (peptides containing beta-lactam rings [A61K 31/00](#); cyclic dipeptides not having in their molecule any other peptide link than those which form their ring, e.g. piperazine-2,5-diones, [A61K 31/00](#); ergot alkaloids of the cyclic peptide type [A61K 31/48](#); containing macromolecular compounds having statistically distributed amino acid units [A61K 31/74](#); medicinal preparations containing antigens or antibodies [A61K 39/00](#); medicinal preparations characterised by the non-active ingredients, e.g. peptides as drug carriers, [A61K 47/00](#))

NOTES

1. The terms or expressions used in this group follow exactly the definitions given in Note (1) following the title of subclass [C07K](#).
2. Preparations containing fragments of peptides or peptides modified by removal or addition of amino acids, by substitution of amino acids by others, or by combination of these modifications are classified as the preparations containing parent peptides. However, preparations containing fragments of peptides having only four or less amino acids are also classified in groups [A61K 38/05](#) - [A61K 38/07](#).
3. Preparations containing peptides prepared by recombinant DNA technology are not classified according to the host, but according to the original peptide expressed, e.g. preparations containing HIV peptide expressed in E. coli are classified with the preparations containing HIV peptides.
4. This group covers also medicinal preparation containing DNA or RNA encoding for peptides as active ingredient.
5. Documents relating to new peptides, e.g. enzymes, or new DNA or RNA encoding for peptides and their use in medicinal preparations are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their medical uses.

U A61K 38/16

- Peptides having more than 20 amino acids; Gastrins; Somatostatins; Melanotropins; Derivatives thereof {(enzyme inhibitors [A61K 38/005](#))}

U A61K 38/17

- • from animals; from humans {(enzyme inhibitors [A61K 38/005](#))}

M A61K 38/1703

- • • {from vertebrates ~~{A61K 38/1767 takes precedence}~~}

T A61K 38/1709

- • • • {from mammals}

D A61K 38/1712

- • • • • {Not used, see subgroup}

<administratively transferred to [A61K 38/1709](#)>

M A61K 38/1716

- • • • • {Amyloid plaque core protein}

M A61K 38/1719

- • • • • {Muscle proteins, e.g. myosin, [or](#) actin}

M A61K 38/1722

- • • • • {Plasma globulins, [lactoglobulin](#) [lactoglobulins](#)}

M A61K 38/1725

- • • • • {Complement proteins, e.g. anaphylatoxin, C3a, [or](#) C5a}

M A61K 38/1729

- • • • • {Cationic antimicrobial peptides, e.g. defensins}

M A61K 38/1732

- • • • • {Lectins}

M A61K 38/1735

- • • • • {Mucins, e.g. human intestinal mucin}

M A61K 38/1738

- • • • • {Calcium binding proteins, e.g. calmodulin}

M	A61K 38/1741	. . . . . {alpha-Glycoproteins}
M	A61K 38/1745	. . . . . {C-reactive protein <i>proteins</i> }
M	A61K 38/1748	. . . . . {Keratin; Cytokeratin}
M	A61K 38/1751	. . . . . {Bactericidal/permeability-increasing protein [BPI]}
M	A61K 38/1754	. . . . . {Insulin-like growth factor binding protein <i>proteins</i> }
M	A61K 38/1758	. . . . . {p53}
M	A61K 38/1761	. . . . . {Apoptosis related proteins, e.g. Apoptotic protease-activating factor-1 (APAF-1), Bax, Bax-inhibitory protein(s)(BI; bax-I), Myeloid cell leukemia associated protein (MCL-1), Inhibitor of apoptosis [IAP]; or Bcl-2}
U	A61K 38/1764 (Frozen)	. . . . . {Tumor specific antigens; Tumor rejection antigen precursors [TRAP], e.g. MAGE}

WARNING

Group [A61K 38/1764](#) is no longer used for the classification of documents as of August 1, 2018. The content of this group is being reclassified into groups [A61K 39/0011](#), [A61K 39/001102](#), [A61K 39/001103](#), [A61K 39/001104](#), [A61K 39/001106](#), [A61K 39/001107](#), [A61K 39/001108](#), [A61K 39/001109](#), [A61K 39/00111](#), [A61K 39/001111](#), [A61K 39/001112](#), [A61K 39/001113](#), [A61K 39/001114](#), [A61K 39/001116](#), [A61K 39/001117](#), [A61K 39/001118](#), [A61K 39/001119](#), [A61K 39/00112](#), [A61K 39/001121](#), [A61K 39/001122](#), [A61K 39/001124](#), [A61K 39/001126](#), [A61K 39/001128](#), [A61K 39/001129](#), [A61K 39/00113](#), [A61K 39/001131](#), [A61K 39/001132](#), [A61K 39/001133](#), [A61K 39/001134](#), [A61K 39/001135](#), [A61K 39/001136](#), [A61K 39/001138](#), [A61K 39/001139](#), [A61K 39/00114](#), [A61K 39/001141](#), [A61K 39/001142](#), [A61K 39/001144](#), [A61K 39/001148](#), [A61K 39/001149](#), [A61K 39/00115](#), [A61K 39/001151](#), [A61K 39/001152](#), [A61K 39/001153](#), [A61K 39/001154](#), [A61K 39/001156](#), [A61K 39/001157](#), [A61K 39/001158](#), [A61K 39/001159](#), [A61K 39/00116](#), [A61K 39/001161](#), [A61K 39/001162](#), [A61K 39/001163](#), [A61K 39/001164](#), [A61K 39/001166](#), [A61K 39/001168](#), [A61K 39/001169](#), [A61K 39/00117](#), [A61K 39/001171](#), [A61K 39/001172](#), [A61K 39/001173](#), [A61K 39/001174](#), [A61K 39/001176](#), [A61K 39/001178](#), [A61K 39/00118](#), [A61K 39/001181](#), [A61K 39/001182](#), [A61K 39/001184](#), [A61K 39/001186](#), [A61K 39/001188](#), [A61K 39/001189](#), [A61K 39/00119](#), [A61K 39/001191](#), [A61K 39/001192](#), [A61K 39/001193](#), [A61K 39/001194](#), [A61K 39/001195](#), [A61K 39/001196](#), [A61K 39/001197](#), [A61K 39/001198](#), [A61K 2039/80](#), [A61K 2039/804](#), [A61K 2039/812](#), [A61K 2039/82](#), [A61K 2039/828](#), [A61K 2039/836](#), [A61K 2039/844](#), [A61K 2039/852](#), [A61K 2039/86](#), [A61K 2039/868](#), [A61K 2039/876](#), [A61K 2039/884](#), and [A61K 2039/892](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0301 (A61K)**U A61K 39/00****Medicinal preparations containing antigens or antibodies (materials for immunoassay [G01N 33/53](#))****NOTES**

1. Groups [A61K 39/002](#) - [A61K 39/295](#) cover preparations containing protozoa, bacteria, viruses, or subunits thereof, e.g. membrane parts.
2. Preparation of antigen or antibody compositions is also classified in subclass [C12N](#), if the step of cultivating the microorganism is of interest.
3. Documents relating to new peptides, e.g. enzymes, or new DNA or RNA encoding for peptides and their use in medicinal preparations are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their medical uses.
4. Documents relating to antibodies or DNA or RNA encoding for antibodies and their use in medicinal preparations are classified in group [C07K 16/00](#) or in group [C12N 9/0002](#) according to the antibodies, with the appropriate indexing codes relating to their medical uses.
5. Documents relating to new therapeutical uses of antibodies or DNA or RNA encoding for antibodies are classified in group [C07K 16/00](#) or in group [C12N 9/0002](#) according to the antibodies, with the appropriate indexing codes relating to their medical uses.
6. Documents relating to medicinal preparations containing different antibodies as active ingredients are classified in group [C07K 16/00](#) according to the different active antibodies, with the appropriate indexing codes relating to their medical uses. However, documents relating to medicinal preparations containing antibodies and other compounds as active ingredients are classified in groups [A61K 39/395](#) - [A61K 39/42](#), in association with symbol [A61K 2300/00](#) in Combination Sets.

U A61K 39/02

• Bacterial antigens

M A61K 39/116

• • Polyvalent bacterial antigens

WARNING

This group is no longer used for the classification of new documents as from April 1, 2012. The backlog of this group is being continuously reclassified to subgroups of A61K 39/0016 and of A61K 39/02

U A61K 39/12

• Viral antigens

M A61K 39/295

• • Polyvalent viral antigens (vaccinia virus or variola virus [A61K 39/285](#));
Mixtures of viral and bacterial antigens

WARNING

This group is no longer used for the classification of new documents as from April 1, 2012. The backlog of this group is being continuously reclassified to A61K 39/0015, to subgroups of A61K 39/0016 and of A61K 39/12

Project: RP0470 (A61K)**U A61K 51/00****Preparations containing radioactive substances for use in therapy or testing in vivo****WARNING**

Groups [A61K 51/00](#) - [A61K 51/1296](#) are incomplete pending reclassification of documents from group [A61K 33/24](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U	A61K 51/02	<ul style="list-style-type: none"> characterised by the carrier {, i.e. characterised by the agent or material covalently linked or complexing the radioactive nucleus}
U	A61K 51/04	<ul style="list-style-type: none"> Organic compounds <p><u>NOTE</u> Organic compounds used as carriers</p>
U	A61K 51/08	<ul style="list-style-type: none"> Peptides, e.g. proteins {, carriers being peptides, polyamino acids, proteins}
M	A61K 51/088	<ul style="list-style-type: none"> {conjugates with carriers being peptides, polyamino acids; <i>or</i> proteins (antibodies A61K 51/10)} <p><u>NOTE</u> The compound which bears, complexes or chelates the radioactive nucleus, is covalently linked/complexed to the carrier being a peptide, polyamino acid; <i>or</i> protein (not being an antibody). Classification is also made according to the nature of the peptide or protein (e.g. if it is BSA, then A61K 51/081 is also indicated). In case of a conjugate comprising a complex-forming compound (chelating group) complexing a radioactive metal linked to the carrier (peptide, protein; <i>or</i> polyamino acid in A61K 51/088), the nature of this complex-forming compound is not classified except if it is the real contribution of the claimed invention and it is an uncommon complexing or chelating group, e.g. ¹¹¹In-DTPA-interleukin 2 is classified in A61K 51/088; new DTPA-like derivatives conjugated to interleukin 2 and complexing ¹¹¹In for use <i>in vivo</i> is classified in A61K 51/0478 and A61K 51/088</p>
T	A61K 51/10	<ul style="list-style-type: none"> Antibodies or immunoglobulins; Fragments thereof {, the carrier being an antibody or an immunoglobulin; <i>an immunoglobulin</i> or a fragment thereof, e.g. a camelised human single domain antibody; <i>or</i> the Fc fragment of an antibody}
D	A61K 51/1003	<ul style="list-style-type: none"> {not used, see subgroups} <p><administratively transferred to A61K 51/10></p>
M	A61K 51/1006	<ul style="list-style-type: none"> {the antibody being against or targeting material from viruses}
M	A61K 51/1009	<ul style="list-style-type: none"> {against material from bacteria}
M	A61K 51/1012	<ul style="list-style-type: none"> {against material from fungi, lichens; <i>or</i> algae}
M	A61K 51/1015	<ul style="list-style-type: none"> {against material from plants}
M	A61K 51/1018	<ul style="list-style-type: none"> {against material from animals or humans}
M	A61K 51/1021	<ul style="list-style-type: none"> {against cytokines, e.g. growth factors, VEGF, TNF, lymphokines; <i>or</i> interferons}
M	A61K 51/1024	<ul style="list-style-type: none"> {against hormones, hormone-releasing or hormone-inhibiting factors}
M	A61K 51/1027	<ul style="list-style-type: none"> {against receptors, cell-surface antigens; <i>or</i> cell-surface determinants}
M	A61K 51/103	<ul style="list-style-type: none"> {against receptors for growth factors or receptors for growth regulators}
M	A61K 51/1033	<ul style="list-style-type: none"> {against receptors for cytokines, lymphokines; <i>or</i> interferons}
M	A61K 51/1036	<ul style="list-style-type: none"> {against hormone receptors}
M	A61K 51/1039	<ul style="list-style-type: none"> {against T-cell receptors}
M	A61K 51/1042	<ul style="list-style-type: none"> {against T-cell <i>T-cell</i> receptor (TcR)-CD3 complex}
M	A61K 51/1045	<ul style="list-style-type: none"> {against animal or human tumor cells or tumor cell determinants}
M	A61K 51/1048	<ul style="list-style-type: none"> {the tumor cell determinant being a carcino embryonic antigen}
M	A61K 51/1051	<ul style="list-style-type: none"> {the tumor cell being from breast, e.g. the antibody being herceptin}
M	A61K 51/1054	<ul style="list-style-type: none"> {the tumor cell being from lung}

- M A61K 51/1057 {the ~~tumour~~*tumor* cell being from liver or pancreas}
- M A61K 51/106 {the tumor cell being from kidney; *or* bladder}
- M A61K 51/1063 {the tumor cell being from stomach or intestines}
- M A61K 51/1066 {the tumor cell being from skin}
- M A61K 51/1069 {the tumor cell being from blood cells, e.g. the cancer being a myeloma}
- M A61K 51/1072 {the tumor cell being from the reproductive system, e.g. ovaria, uterus, testes; *or* prostate}
- M A61K 51/1075 {the antibody being against an enzyme}
- M A61K 51/1078 {the antibody being against an immunoglobulin, i.e. being an (anti)-anti-idiotypic antibody}
- D A61K 51/1081 {~~the antibody being against a material not provided elsewhere~~
<administratively transferred to [A61K 51/10](#)>}
- M A61K 51/1084 {the antibody being a hybrid immunoglobulin}
- M A61K 51/1087 {the immunoglobulin comprises domains from different animal species, e.g. chimeric immunoglobulins}
- M A61K 51/109 {immunoglobulins having two or more different antigen-binding sites; *or* multifunctional antibodies}
- M A61K 51/1093 {conjugates with carriers being antibodies}

NOTE

The compound which bears, complexes or chelates the radioactive nucleus, being covalently linked or complexed to the carrier being an antibody. Classification being also made according to the appropriate [A61K 51/1003 subclass](#) [A61K 51/10 subgroup](#). In case of a conjugate comprising a complex-forming compound (chelating group) complexing a radioactive metal linked to the carrier (antibody in [A61K 51/1093](#)), the nature of this complex-forming compound being not classified except if it being the real contribution of the claimed invention and it being an uncommon complexing/chelating group, e.g. ¹¹¹In-DTPA-herceptin being classified in [A61K 51/1093](#) and [A61K 51/1051](#), new DTPA-like derivatives conjugated to herceptin and complexing ¹¹¹In for use *in vivo* being classified in [A61K 51/0478](#), [A61K 51/1093](#) and [A61K 51/1051](#)

Project: MP0301 (A63B)

- U A63B 23/00 Exercising apparatus specially adapted for particular parts of the body ([A63B 22/00](#) takes precedence; force-resisting aspects [A63B 21/00](#); electric or electronic controls therefor [A63B 24/00](#); devices for exercising or strengthening of fingers, or arms in teaching operation of keyboards [G09B 15/06](#))
 - U A63B 23/035 for limbs, i.e. upper or lower limbs, e.g. simultaneously
 - M A63B 23/03508 {For a single arm or leg, ([A63B 21/0726](#) takes precedence)}
- WARNING**
not complete, pending the completion of a reclassification
- U A63B 23/12 for upper limbs {or related muscles, e.g. chest, upper back or shoulder muscles (bench press exercises [A63B 21/078](#); for teaching music [G09B 15/06](#))}

M A63B 23/1209 . . . {Involving a bending of elbow and shoulder joints simultaneously}

WARNING

~~not complete, pending the completion of a reclassification~~

Project: MP0439 (A63D)

M A63D BOWLING GAMES, e.g. SKITTLES, BOCCE OR BOWLS; INSTALLATIONS THEREFOR; BAGATELLE OR SIMILAR GAMES; BILLIARDS (balls [A63B 37/00](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (A63J)

M A63J DEVICES FOR THEATRES, CIRCUSES, OR THE LIKE; CONJURING APPLIANCES OR THE LIKE

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0231, MP0439 (B01J)

M B01J CHEMICAL OR PHYSICAL PROCESSES, e.g. CATALYSIS OR COLLOID CHEMISTRY; THEIR RELEVANT APPARATUS

NOTES

1. In this subclass, the following terms or expressions are used with the meanings indicated :

- "solid particles" includes such particles whether catalysts, reactants or inert in solid, semi-solid or pasty state;
- "fluidised particles" means finely divided solid particles lifted and agitated by a stream of fluid;
- "fluidised bed-technique" means fluid-solid contacting technique in which finely divided particles are lifted and agitated by a rising stream of fluid, said stream having such a speed as to form a lower dense phase (the "bed") and an upper dilute fluidised phase of "fluidised particles";
- "processes conducted in the presence of solid particles" does not include processes wherein the only solid particles present are formed during the reaction.

2. In this subclass, tradenames that are often found in scientific and patent literature have been used in order to define precisely the scope of the groups

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[B01J 37/025](#)

covered by

[B01J 37/02](#)

~~B01D 15/04~~ [B01J 32/00](#)

covered by

~~B01J 39/00~~

~~B01J 21/00~~ - ~~B01J 49/90~~

~~B01J 29/90~~, ~~B01J 33/00~~ -

~~B01J 38/74~~

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0231 (B01J)

B01J 20/00 -
B01J 38/00**Solid sorbent compositions or filter aid compositions; Sorbents for chromatography; Catalysts**NOTES

1. In groups [B01J 20/00](#) - [B01J 31/00](#), metal salts having an anion composed of metal and oxygen only, e.g. molybdates, are considered as chemically bound mixtures of the component metal oxides.
2. Attention is drawn to the definitions of groups of chemical elements following the title of section [C](#).
3. In group [B01J 20/00](#) and in each set of groups [B01J 21/00](#) - [B01J 31/00](#) and [B01J 32/00](#) - [B01J 33/00](#) - [B01J 38/00](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
4. Pure compounds or elements, or their recovery from solid sorbent compositions, filter aid compositions, or catalysts, are classified in the appropriate subclass for chemical compounds or elements. However, when it is explicitly stated that the pure compound or element, in a particular form, is especially useful as a solid sorbent, filter aid, or catalyst, it is further classified in group [B01J 20/00](#) or [B01J 35/00](#).
5. {In groups [B01J 21/00](#) - [B01J 38/00](#), the following term is used with the meaning indicated:
 - a. "catalyst" covers also a carrier-forming part of the catalyst.
6. {Classification of the:
 - **carriers;**
 - forms or physical properties;
 - preparation or activation;
 - regeneration or reactivation of catalysts according to more than one of main groups [B01J 21/00](#) - [B01J 31/00](#) is made in the following general groups:
 - **[B01J 32/00](#) for such carriers;**
 - [B01J 35/00](#) for such forms or physical properties;
 - [B01J 37/00](#) for such preparation or activation;
 - [B01J 38/00](#) for such regeneration or reactivation.

U B01J 20/00

Solid sorbent compositions or filter aid compositions; Sorbents for chromatography; Processes for preparing, regenerating or reactivating thereof

M B01J 21/00

Catalysts comprising the elements, oxides, or hydroxides of magnesium, boron, aluminium, carbon, silicon, titanium, zirconium, or hafniumWARNING

Groups [B01J 21/00](#) - [B01J 21/20](#) are incomplete pending reclassification of documents from group [B01J 32/00](#).

All groups listed in this warning should be considered in order to perform a complete search.

M B01J 23/00

Catalysts comprising metals or metal oxides or hydroxides, not provided for in group [B01J 21/00](#) ([B01J 21/16](#) takes precedence)WARNING

Groups [B01J 23/00](#) - [B01J 23/96](#) are incomplete pending reclassification of documents from group [B01J 32/00](#).

All groups listed in this warning should be considered in order to perform a complete search.

M B01J 25/00**Catalysts of the Raney type****WARNING**

Groups [B01J 25/00](#) - [B01J 25/04](#) are incomplete pending reclassification of documents from group [B01J 32/00](#).

All groups listed in this warning should be considered in order to perform a complete search.

M B01J 27/00**Catalysts comprising the elements or compounds of halogens, sulfur, selenium, tellurium, phosphorus or nitrogen; Catalysts comprising carbon compounds****NOTE**

Metal catalysts or metal oxide catalysts activated or conditioned by halogens, sulfur or phosphorus, or compounds thereof are classified in the appropriate groups for metal or metal oxide catalysts

WARNING

Groups [B01J 27/00](#) - [B01J 27/32](#) are incomplete pending reclassification of documents from group [B01J 32/00](#).

All groups listed in this warning should be considered in order to perform a complete search.

M B01J 29/00**Catalysts comprising molecular sieves {(molecular sieves per se [C01B](#))}****NOTES**

1. In this group, the following term is used with the meaning indicated:

- "zeolites" means:
 - i. crystalline aluminosilicates with base-exchange and molecular sieve properties, having three dimensional, microporous lattice framework structure of tetrahedral oxide units;
 - ii. compounds isomorphous to those of the former category, wherein the aluminium or silicon atoms in the framework are partly or wholly replaced by atoms of other elements, e.g. by gallium, germanium, phosphorus or boron.

2. If metals are introduced into the framework of the molecular sieve already in the synthesis stage, [B01J 29/86](#) - [B01J 29/89](#) take precedence.

3. Mixtures of molecular sieves are classified in [B01J 29/005](#) or [B01J 29/80](#) and receive indexing codes chosen from groups [B01J 29/03](#) - [B01J 29/89](#) to identify the individual constituents of these mixtures

WARNING

Groups [B01J 29/00](#) - [B01J 29/90](#) are incomplete pending reclassification of documents from group [B01J 32/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

**F B01J 32/00
(Frozen)****Catalyst carriers in general****WARNING**

Group [B01J 32/00](#) is no longer used for the classification of documents as of May 1, 2020.

The content of this group is being reclassified into groups [B01J 21/00](#) - [B01J 29/90](#) and [B01J 33/00](#) - [B01J 38/74](#).

Groups [B01J 32/00](#), [B01J 21/00](#) - [B01J 29/90](#), and [B01J 33/00](#) - [B01J 38/74](#) should be considered in order to perform a complete search.

M B01J 33/00**Protection of catalysts, e.g. by coating****WARNING**

*Group [B01J 33/00](#) is incomplete pending reclassification of documents from group [B01J 32/00](#).
Groups [B01J 32/00](#) and [B01J 33/00](#) should be considered in order to perform a complete search.*

M B01J 35/00**Catalysts, in general, characterised by their form or physical properties****WARNING**

*Groups [B01J 35/00](#) - [B01J 35/12](#) are incomplete pending reclassification of documents from group [B01J 32/00](#).
All groups listed in this warning should be considered in order to perform a complete search.*

M B01J 37/00**Processes, in general, for preparing catalysts; Processes, in general, for activation of catalysts****WARNING**

*Groups [B01J 37/00](#) - [B01J 37/36](#) are incomplete pending reclassification of documents from group [B01J 32/00](#).
All groups listed in this warning should be considered in order to perform a complete search.*

M B01J 38/00**Regeneration or reactivation of catalysts, in general****WARNING**

*Groups [B01J 38/00](#) - [B01J 38/74](#) are incomplete pending reclassification of documents from group [B01J 32/00](#).
All groups listed in this warning should be considered in order to perform a complete search.*

Project: MP0301 (B03D)**M B03D**

FLOTATION; DIFFERENTIAL SEDIMENTATION (sedimentation in general [B01D 21/00](#); in combination with other separation of solids [B03B](#); sink-float separation [B03B 5/28](#); detergents, soaps [C11D](#))

WARNING

1. The following groups are not complete:-

[B03D 1/023](#), see also [B03D 1/02](#)
[B03D 1/025](#), see also [B03D 1/02](#)
[B03D 1/026](#), see also [B03D 1/02](#)
[B03D 1/028](#), see also [B03D 1/02](#)
[B03D 1/082](#), see also [B03D 1/08](#)
[B03D 1/085](#), see also [B03D 1/08](#)
[B03D 1/087](#), see also [B03D 1/08](#)
[B03D 1/1406](#), see also [B03D 1/14](#)
[B03D 1/1443](#), see also [B03D 1/14](#)
[B03D 1/145](#), see also [B03D 1/14](#)
[B03D 1/1456](#), see also [B03D 1/14](#)
[B03D 1/1462](#), see also [B03D 1/14](#)
[B03D 1/1468](#), see also [B03D 1/14](#)
[B03D 1/1475](#), see also [B03D 1/14](#)
[B03D 1/1487](#), see also [B03D 1/14](#)
[B03D 1/1493](#), see also [B03D 1/14](#)
[B03D 1/242](#), see also [B03D 1/24](#)

~~B03D 1/247, see also B03D 1/24~~

~~2. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:~~

~~B03D 101/00-B03D 103/10 covered by B03D 2201/00--
B03D 2203/10~~

~~3. 1. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.~~

Project: RP0166-F (B05B)

M B05B 1/00

Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves, heating means ([B05B 3/00](#), [B05B 5/00](#), [B05B 7/00](#) take precedence; {nozzles for baths with water or gas jets [A61H 33/00](#), e.g. [A61H 33/6063](#), [A61H 33/6021](#), [A61H 33/026](#) or [A61H 33/027](#); Nozzles specially adapted for fire-extinguishing [A62C 31/02](#); Nozzles for generating high velocity abrasive fluid jets [B24C 5/04](#); } nozzles for jet-ink printing mechanisms [B41J 2/135](#); {nozzles for filling containers [B65B 39/00](#); } nozzles for liquid-dispensing, e.g. in vehicle service stations [B67D 7/42](#))

WARNING

~~Group B05B 1/00 is impacted by reclassification into group B05B 1/002. Groups B05B 1/00 and B05B 1/002 should be considered to perform a complete search.~~

M B05B 1/002

- {designed to reduce the generation or the transmission of noise or to produce a particular sound; associated with noise monitoring means}

WARNING

~~Group B05B 1/002 is incomplete pending reclassification of documents from group B05B 1/00. Groups B05B 1/00 and B05B 1/002 should be considered to perform a complete search.~~

M B05B 1/30

- designed to control volume of flow, e.g. with adjustable passages {([B05B 11/0094](#) takes precedence)}

WARNING

~~Group B05B 1/30 is impacted by reclassification into group B05B 11/0094. Groups B05B 1/30 and B05B 11/0094 should be considered to perform a complete search.~~

M B05B 1/34

- designed to influence the nature of flow of the liquid or other fluent material, e.g. to produce swirl (designed to control volume of flow [B05B 1/30](#))

WARNING

~~Group B05B 1/34 is impacted by reclassification into group B05B 1/3402. Groups B05B 1/34 and B05B 1/3402 should be considered to perform a complete search.~~

M B05B 1/3402

- {to avoid or to reduce turbulencies, e.g. comprising fluid flow straightening means}

WARNING

~~Group B05B 1/3402 is incomplete pending reclassification of documents from group B05B 1/34. Groups B05B 1/34 and B05B 1/3402 should be considered to perform a complete search.~~

U	B05B 7/00	Spraying apparatus for discharge of liquids or other fluent materials from two or more sources, e.g. of liquid and air, of powder and gas (B05B 3/00, B05B 5/00 {, B05B 11/06} take precedence)
U	B05B 7/24	<ul style="list-style-type: none"> • with means, e.g. a container, for supplying liquid or other fluent material to a discharge device (B05B 7/14, B05B 7/16, B05B 11/00 take precedence)
U	B05B 7/2402	<ul style="list-style-type: none"> • • {Apparatus to be carried on or by a person, e.g. by hand; Apparatus comprising containers fixed to the discharge device (B05B 7/0012 takes precedence)}
M	B05B 7/247	<ul style="list-style-type: none"> • • • {a liquid being fed by gravity only from the container to the nozzle (B05B 7/2478 takes precedence)} <p>WARNING Group B05B 7/247 is impacted by reclassification into group B05B 7/2478. Groups B05B 7/247 and B05B 7/2478 should be considered to perform a complete search.</p>
M	B05B 7/2478	<ul style="list-style-type: none"> • • • {Gun with a container which, in normal use, is located above the gun} <p>WARNING Group B05B 7/2478 is incomplete pending reclassification of documents from B05B 7/247. Groups B05B 7/247 and B05B 7/2478 should be considered in order to perform a complete search.</p>
U	B05B 11/00	Single-unit, i.e. unitary, hand-held apparatus {comprising a container and a discharge nozzle attached thereto}, in which flow of liquid or other fluent material is produced by {the muscular energy of} the operator at the moment of use {or by an equivalent manipulator independent from the apparatus (apparatus with an external source or the possibility of permanent accumulation of pressure for discharging the liquid or fluid material B05B 7/00, B05B 9/00)}
U	B05B 11/0005	<ul style="list-style-type: none"> • {Components or details (of single units wherein the flow is effected by a pump B05B 11/3042)}
M	B05B 11/0037	<ul style="list-style-type: none"> • • {Containers (for several components B05B 11/0078)} <p>WARNING Group B05B 11/0037 is impacted by reclassification into group B05B 11/0038. Groups B05B 11/0037 and B05B 11/0038 should be considered to perform a complete search.</p>
M	B05B 11/0038	<ul style="list-style-type: none"> • • • {Inner container disposed in an outer shell or outer casing} <p>WARNING Group B05B 11/0038 is incomplete pending reclassification of documents from group B05B 11/0037. Groups B05B 11/0037 and B05B 11/0038 should be considered to perform a complete search.</p>
M	B05B 11/0039	<ul style="list-style-type: none"> • • • {associated with means for compensating the pressure difference between the ambient pressure and the pressure inside the container, e.g. pressure relief means} <p>WARNING Group B05B 11/0039 is impacted by reclassification into group B05B 11/00442. Groups B05B 11/0039 and B05B 11/00442 should be considered to perform a complete search.</p>

M	B05B 11/0041	<ul style="list-style-type: none"> • • • {compensating underpressure without contact of the fluid remaining in the container with the atmospheric air} <p><u>WARNING</u> Group B05B 11/0041 is impacted by reclassification into group B05B 11/00411. Groups B05B 11/0041 and B05B 11/00411 should be considered to perform a complete search.</p>
M	B05B 11/00411	<ul style="list-style-type: none"> • • • • {the means being an inert gas} <p><u>WARNING</u> Group B05B 11/00411 is incomplete pending reclassification of documents from group B05B 11/0041. Groups B05B 11/0041 and B05B 11/00411 should be considered to perform a complete search.</p>
U	B05B 11/0044	<ul style="list-style-type: none"> • • • • {compensating underpressure by ingress of atmospheric air into the container, i.e. with venting means (venting means for deformable containers B05B 11/047)}
M	B05B 11/00442	<ul style="list-style-type: none"> • • • • • {the means being actuated by the difference between the atmospheric pressure and the pressure inside the container} <p><u>WARNING</u> Group B05B 11/00442 is incomplete pending reclassification of documents from group B05B 11/0039. Groups B05B 11/0039 and B05B 11/00442 should be considered to perform a complete search.</p>
U	B05B 11/0062	<ul style="list-style-type: none"> • {Outlet valves actuated by the pressure of the fluid to be sprayed (fluid-actuated pump outlet valve arrangements B05B 11/3016, B05B 11/3022, B05B 11/3097, B05B 11/3033, B05B 11/3036, B05B 11/304, B05B 11/3064)}
U	B05B 11/0064	<ul style="list-style-type: none"> • • • {Lift valves (B05B 11/007 takes precedence)}
M	B05B 11/0067	<ul style="list-style-type: none"> • • • • {having a valve seat located downstream the valve element (B05B 11/3016, B05B 11/3036 take precedence)} <p><u>WARNING</u> Group B05B 11/0067 is impacted by reclassification into groups B05B 11/3016 and B05B 11/3036. All groups listed in this Warning should be considered to perform a complete search.</p>
U	B05B 11/0089	<ul style="list-style-type: none"> • • {Dispensing tubes}
U	B05B 11/0091	<ul style="list-style-type: none"> • • • {movable, e.g. articulated on the sprayer}
M	B05B 11/0094	<ul style="list-style-type: none"> • • • • {movement of the dispensing tube controlling a valve} <p><u>WARNING</u> Group B05B 11/0094 is incomplete pending reclassification of documents from B05B 1/30. Groups B05B 1/30 and B05B 11/0094 should be considered to perform a complete search.</p>
U	B05B 11/30	<ul style="list-style-type: none"> • {the flow being effected by a pump}
U	B05B 11/3001	<ul style="list-style-type: none"> • • {Piston pumps (B05B 11/3087, B05B 11/3088, B05B 11/309 take precedence)}

- M B05B 11/3016
- • {the outlet valve having a valve seat located downstream a movable valve element controlled by a pressure actuated controlling element ([B05B 11/3022](#), [B05B 11/3023](#) take precedence)}
- WARNING**
Group B05B 11/3016 is incomplete pending reclassification of documents from B05B 11/0067.
Groups B05B 11/0067 and B05B 11/3016 should be considered to perform a complete search.
- U B05B 11/3028
- {Pumps having a pumping chamber with a deformable wall ([B05B 11/3087](#) take precedence)}
- M B05B 11/3036
- • {the outlet valve being opened in the direction opposite to the fluid flow downstream the outlet valve by the pressure acting on a valve controlling element}
- WARNING**
Group B05B 11/3036 is incomplete pending reclassification of documents from B05B 11/0067.
Groups B05B 11/0067 and B05B 11/3036 should be considered to perform a complete search.
- U B05B 12/00
- Arrangements for controlling delivery; Arrangements for controlling the spray area**
- WARNING**
Group [B05B 12/00](#) is impacted by reclassification into groups [B05B 12/16](#), [B05B 12/18](#), [B05B 12/20](#), [B05B 12/22](#), [B05B 12/24](#), [B05B 12/26](#), [B05B 12/28](#), [B05B 12/30](#), [B05B 12/32](#), [B05B 12/34](#), [B05B 12/36](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M B05B 12/002
- {Manually-actuated controlling means, e.g. push buttons, levers or triggers (for single units [B05B 11/00](#))}
- WARNING**
Group B05B 12/002 is impacted by reclassification into groups B05B 12/0022, B05B 12/0024, B05B 12/0026.
All groups listed in this Warning should be considered to perform a complete search.
- M B05B 12/0022
- • {associated with means for restricting their movement}
- WARNING**
Groups B05B 12/0022, B05B 12/0024, B05B 12/0026 are incomplete pending reclassification of documents from group B05B 12/002.
All groups listed in this Warning should be considered to perform a complete search.

Project: MP0301 (B05C)

- U B05C 5/00
- Apparatus in which liquid or other fluent material is projected, poured or allowed to flow on to the surface of the work ([B05C 7/00](#) takes precedence; essentially involving spraying or electrostatic projection [B05B](#))**
- U B05C 5/02
- {the liquid or other fluent material being discharged through an outlet orifice by pressure, e.g.} from an outlet device in contact or almost in contact, with the work
- U B05C 5/0254
- • {Coating heads with slot-shaped outlet ([B05C 5/0283](#) takes precedence)}

M	B05C 5/0262	<ul style="list-style-type: none"> • • • {adjustable in width, i.e. having lips movable relative to each other in order to modify the slot width, e.g. to close it} <p><u>WARNING</u> Not complete, see B05C 5/0254</p>
M	B05C 5/0266	<ul style="list-style-type: none"> • • • {adjustable in length, e.g. for coating webs of different width} <p><u>WARNING</u> Not complete, see B05C 5/0254</p>
U	B05C 5/027	<ul style="list-style-type: none"> • • {Coating heads with several outlets, e.g. aligned transversally to the moving direction of a web to be coated (B05C 5/0254 takes precedence)}
M	B05C 5/0275	<ul style="list-style-type: none"> • • • {flow controlled, e.g. by a valve} <p><u>WARNING</u> Not complete, see B05C 5/027</p>
U	B05C 11/00	<p>Component parts, details or accessories not specifically provided for in groups B05C 1/00 - B05C 9/00 (means for manipulating or holding work B05C 13/00; enclosures for apparatus, booths B05C 15/00; spray booths B05B 16/00)</p>
U	B05C 11/10	<ul style="list-style-type: none"> • Storage, supply or control of liquid or other fluent material; Recovery of excess liquid or other fluent material {(B05C 1/0813, B05C 5/0225, B05C 17/002 and B05C 19/06 take precedence)}
M	B05C 11/1002	<ul style="list-style-type: none"> • • {Means for controlling supply, i.e. flow or pressure, of liquid or other fluent material to the applying apparatus, e.g. valves} <p><u>WARNING</u> not complete, see B05C 11/10</p>
M	B05C 11/1005	<ul style="list-style-type: none"> • • • {responsive to condition of liquid or other fluent material already applied to the surface, e.g. coating thickness, weight or pattern} <p><u>WARNING</u> not complete, see B05C 11/10</p>
M	B05C 11/1007	<ul style="list-style-type: none"> • • • {responsive to condition of liquid or other fluent material (B05C 11/1005 takes precedence)} <p><u>WARNING</u> not complete, see B05C 11/10</p>
M	B05C 11/101	<ul style="list-style-type: none"> • • • {responsive to weight of a container for liquid or other fluent material; responsive to level of liquid or other fluent material in a container} <p><u>WARNING</u> not complete, see B05C 11/10</p>
M	B05C 11/1013	<ul style="list-style-type: none"> • • • {responsive to flow or pressure of liquid or other fluent material (B05C 11/101 takes precedence; control of flow in general G05D 7/00; control of fluid pressure in general G05D 16/00)} <p><u>WARNING</u> not complete, see B05C 11/10</p>

- M B05C 11/1015 • • • {responsive to a conditions of ambient medium or target, e.g. humidity, temperature ([B05C 11/1005](#) takes precedence); responsive to position or movement of the coating head relative to the target}

WARNING

not complete, see [B05C 11/10](#)

- M B05C 11/1018 • • • {responsive to distance of target}

WARNING

not complete, see [B05C 11/10](#)

- M B05C 11/1021 • • • {responsive to presence or shape of target ([B05C 11/1018](#) takes precedence)}

WARNING

not complete, see [B05C 11/10](#)

- M B05C 11/1023 • • • {responsive to velocity of target, e.g. to web advancement rate}

WARNING

not complete, see [B05C 11/10](#)

- U B05C 11/1026 • • • {Valves (in general [F16K](#); [B05C 5/0225](#) takes precedence)}

- M B05C 11/1028 • • • {Lift valves}

WARNING

not complete, see [B05C 11/1026](#)

- M B05C 11/1031 • • • {Gate valves; Sliding valves}

WARNING

not complete, see [B05C 11/1026](#)

- M B05C 11/1036 • {Means for supplying a selected one of a plurality of liquids or other fluent materials, or several in selected proportions, to the applying apparatus}

WARNING

not complete, see [B05C 11/10](#)

Project: RP0469 (B07C)

- U B07C 5/00 **Sorting according to a characteristic or feature of the articles or material being sorted, e.g. by control effected by devices which detect or measure such characteristic or feature; Sorting by manually actuated devices, e.g. switches (sorting by hand only [B07C 7/00](#); separating solids from solids by sieving, screening, or sifting or by using gas currents or other separating by dry methods applicable to bulk material [B07B](#))**
- U B07C 5/04 • Sorting according to size {(sorting devices as a component of the automatic supply and removal of workpieces [B23Q 7/12](#))}
- B07C 5/08 • • measured electrically or electronically ([B07C 5/10](#) takes precedence {; sorting according to electric or electromagnetic properties [B07C 5/344](#); measuring size in general using electric or magnetic means [G01B 7/00](#); testing coins [G07D 5/00](#), [G07F 3/02](#)})
- U B07C 5/34 • Sorting according to other particular properties {(material testing *per se* [G01N](#); quality control [G07C 3/14](#))}

B07C 5/344

- according to electric or electromagnetic properties {(sorting according to size measured electrically or electronically [B07C 5/08](#); material testing by magnetic means [G01N 24/00](#), [G01N 27/00](#), by electrical means [G01N 27/00](#); electrical measuring devices in general [G01R](#); coin testing [G07D 5/00](#); [G07F 3/02](#)}}

Project: MP0439 (B22F)**M B22F**

WORKING METALLIC POWDER; MANUFACTURE OF ARTICLES FROM METALLIC POWDER; MAKING METALLIC POWDER (processes or devices for granulating materials in general [B01J 2/00](#); making ceramics by compacting or sintering [C04B](#), e.g. [C04B 35/64](#); for the production of metals as such, see class [C22](#); reduction or decomposition of metal compounds in general [C22B](#); making alloys by powder metallurgy [C22C](#); electrolytic production of metal powder [C25C 5/00](#))

NOTES

1. This subclass covers the making of metallic powder only insofar as powder with specific physical characteristics is made;
2. In this subclass, the following terms or expressions are used with the meanings indicated:
 - "metallic powder" covers powders containing a substantial proportion of non-metallic material;
 - "powder" includes somewhat larger particles which are worked, obtained or behave in a manner similar to powder, e.g. fibres.

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[B22F 3/035](#) covered by [B22F 3/03](#)

2. *In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.*

Project: RP0524 (B23P)**M B23P 19/00**

Machines for simply fitting together or separating metal parts *or objects*, or metal and non-metal parts, whether or not involving some deformation ~~{(connecting metal parts or objects by metal-working procedures [B23P 11/00](#), [B21J](#), [B23K](#) connecting metal parts or objects by metal-working procedures [B21J](#), [B23K](#))}~~; Tools or devices therefor so far as not provided for in other classes (hand tools in general [B25](#))

M B23P 19/02

- for connecting objects by press fit or for detaching same ([B23P 19/10](#) takes precedence)

Project: MP0439 (B25D)**M B25D**

PERCUSSIVE TOOLS {(percussive machines for forging [B21J](#); hand-held drilling machines, in general [B23B 45/00](#), for wood [B27C 3/08](#); drilling machines, used for mining or quarrying, with reciprocating tool which is turned intermittently when out of contact with the working face [E21B 1/00](#))}

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[B25D 13/00](#) covered by [B25D 11/064](#)

[B25D 15/00](#) covered by [B25D 11/066](#)

[B25D 15/02](#) covered by [B25D 11/068](#)

[B25D 17/10](#) covered by [B25D 17/00](#)

B25D 17/14	covered by	B23Q 11/0042
B25D 17/16	covered by	B23Q 11/0042
B25D 17/18	covered by	B23Q 11/0042

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0027 (B28D)

- U B28D 1/00** Working stone or stone-like materials, e.g. brick, concrete {or glass}, not provided for elsewhere; Machines, devices, tools therefor (fine working of gems, jewels, crystals [B28D 5/00](#); working by grinding or polishing [B24](#); devices or means for dressing or conditioning abrasive surfaces [B24B 53/00](#))
- B28D 1/14
- by boring or drilling (rotary drilling machines [B23B](#); {tools for drilling machines [B23B 51/00](#)}; portabe percussive machines [B25D](#); ~~{rotary drilling machines for mining or quarrying [E21C 1/00](#)}; {rotary drilling machines for mining or quarrying [E21B 3/00](#)}~~

Project: MP0301 (B29C)

- U B29C 66/00** {General aspects of processes or apparatus for joining preformed parts (means for handling the parts to be joined [B29C 65/78](#); testing the joint [B29C 65/82](#))}
- M B29C 66/40
- {General aspects of joining substantially flat articles, e.g. plates, sheets or web-like materials; Making flat seams in tubular or hollow articles; Joining single elements to substantially flat surfaces}
- WARNING**
Group B29C 66/40 and subgroups are not complete, pending a reorganisation; see also B29C 65/00 and its subgroups
- U B29C 66/41
- • {Joining substantially flat articles ([B29C 66/47](#) and subgroups take precedence); Making flat seams in tubular or hollow articles ([B29C 66/51](#) and subgroups take precedence)}
- U B29C 66/43
- • • {Joining a relatively small portion of the surface of said articles ([B29C 66/45](#) takes precedence)}
- M B29C 66/438
- • • • {Joining sheets for making hollow-walled, channelled structures or multi-tubular articles}
- WARNING**
Not complete, pending a reorganisation; see also B29C 66/439
- M B29C 66/439
- • • • {Joining sheets for making inflated articles without using a mould}
- WARNING**
Not complete, pending a reorganisation; see also B29C 66/438
- M B29C 66/70
- {characterised by the composition, physical properties or the structure of the material of the parts to be joined; Joining with non-plastics material (chemical aspects [C08J 5/12](#), [C09J](#))}
- WARNING**
Group B29C 66/70 and subgroups are not complete, pending a reorganisation; see also B29C 65/00 and its subgroups

- M B29C 66/71
- {characterised by the composition of the plastics material of the parts to be joined (welding bar compositions [B29C 65/125](#))}
- WARNING**
Group B29C 66/71 and subgroups are not complete, pending a reorganisation
- M B29C 66/74
- {Joining plastics material to non-plastics material}
- NOTE**
When classifying in this group, joining techniques are additionally classified in the relevant groups, i.e. in [B29C 65/44](#) and subgroups or in [B29C 65/64](#) and subgroups
- WARNING**
Group B29C 66/74 and subgroups are not complete, pending a reorganisation; see also B29C 65/00 and its subgroups
- M B29C 66/80
- {General aspects of machine operations or constructions and parts thereof}
- WARNING**
Group B29C 66/80 and subgroups are not complete, pending a reorganisation; see also B29C 65/00 and its subgroups
- M B29C 66/81
- {General aspects of the pressing elements, i.e. the elements applying pressure on the parts to be joined in the area to be joined, e.g. the welding jaws or clamps (holding or clamping means for handling purposes [B29C 65/7841](#))}
- WARNING**
Group B29C 66/81 and subgroups are not complete, pending a reorganisation; see also B29C 65/00 and its subgroups
- U B29C 66/812
- • {characterised by the composition, by the structure, by the intensive physical properties or by the optical properties of the material constituting the pressing elements, e.g. constituting the welding jaws or clamps}
- M B29C 66/8122
- • • {characterised by the composition of the material constituting the pressing elements, e.g. constituting the welding jaws or clamps}
- WARNING**
Not complete, pending a reorganisation; see also B29K 2801/00–B29K 2911/14
- M B29C 66/83
- {characterised by the movement of the joining or pressing tools}
- WARNING**
Group B29C 66/83 and subgroups are not complete, pending a reorganisation; see also this group and its subgroups and B29C 65/00 and its subgroups
- M B29C 66/90
- {Measuring or controlling the joining process}
- WARNING**
Group B29C 66/90 and subgroups are not complete, pending a reorganisation; see also this group and its subgroups

Project: RP0417 (B60C)

- U B60C 11/00 Tyre tread bands; Tread patterns; Anti-skid inserts
- U B60C 11/03
- Tread patterns

- U B60C 11/0311 . . {Patterns comprising tread lugs arranged parallel or oblique to the axis of rotation}
- U B60C 11/0316 . . . {further characterised by the groove cross-section}
- D B60C 2011/0325 . . {Irregular patterns with particular pitch sequence}
<administratively transferred to [B60C 11/0318](#)>
- U B60C 19/00 Tyre parts or constructions not otherwise provided for**
- U B60C 19/12 . Puncture preventing arrangements ([B60C 9/00](#) takes precedence; inflatable inserts having reinforcing means [B60C 5/08](#) {}; sealing compositions per se [B29C 73/163](#); devices for introducing sealing compositions into the tyre [B29C 73/166](#));
- U B60C 19/127 . . {for inner tubes}
- M B60C 23/00 Devices for measuring, signalling, controlling, or distributing tyre pressure or temperature, specially adapted for mounting on vehicles (measuring in general [G01](#), e.g. [G01L 17/00](#); remote signalling in general [G08](#)); Arrangement of tyre inflating devices on vehicles, e.g. of pumps, of tanks (~~supplying air for tyre inflation B60S 5/04~~ *air pumps per se F04; tanks per se F17C*); Tyre cooling arrangements**
- U B60C 23/001 . {Devices for manually or automatically controlling or distributing tyre pressure whilst the vehicle is moving}
- C B60C 23/003 . . {~~the control being done on the vehicle, i.e. comprising a rotating joint between a vehicle-mounted tank and the tyre~~ *comprising rotational joints between vehicle-mounted pressure sources and the tyres*}
- WARNING**
Group [B60C 23/003](#) is impacted by reclassification into groups [B60C 23/00305](#) - [B60C 23/0039](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N [B60C 23/00305](#) . . . {Wheel circumventing supply lines, e.g. not through or about the axles}
WARNING
Group [B60C 23/00305](#) is incomplete pending reclassification of documents from group [B60C 23/003](#).
Groups [B60C 23/003](#) and [B60C 23/00305](#) should be considered in order to perform a complete search.
- N [B60C 23/00309](#) . . . {characterised by the location of the components, e.g. valves, sealings, conduits or sensors}
WARNING
Groups [B60C 23/00309](#) – [B60C 23/00336](#) are incomplete pending reclassification of documents from group [B60C 23/003](#).
Groups [B60C 23/00309](#) – [B60C 23/00336](#) should be considered in order to perform a complete search.
- N [B60C 23/00318](#) {on the wheels or the hubs}
- N [B60C 23/00327](#) {integrally with the hub caps}
- N [B60C 23/00336](#) {on the axles}
- N [B60C 23/00345](#) . . . {Details of the rotational joints}
WARNING
Groups [B60C 23/00345](#) and [B60C 23/00347](#) are incomplete pending reclassification of documents from group [B60C 23/003](#).

Groups [B60C 23/00345](#), [B60C 23/00347](#) and [B60C 23/003](#) should be considered in order to perform a complete search.

N B60C 23/00347 . . . {comprising two or more feedthrough}

N B60C 23/00354 . . . {Details of valves}

WARNING

Group [B60C 23/00354](#) is incomplete pending reclassification of documents from group [B60C 23/003](#).

Groups [B60C 23/00354](#) and [B60C 23/003](#) should be considered in order to perform a complete search.

N B60C 23/00363 . . . {Details of sealings}

WARNING

Group [B60C 23/00363](#) is incomplete pending reclassification of documents from group [B60C 23/003](#).

Groups [B60C 23/00363](#) and [B60C 23/003](#) should be considered in order to perform a complete search.

N B60C 23/00372 . . . {characterised by fluid diagrams}

WARNING

Group [B60C 23/00372](#) is incomplete pending reclassification of documents from group [B60C 23/003](#).

Groups [B60C 23/00372](#) and [B60C 23/003](#) should be considered in order to perform a complete search.

N B60C 23/00381 . . . {specially adapted for steerable wheels}

WARNING

Group [B60C 23/00381](#) is incomplete pending reclassification of documents from group [B60C 23/003](#).

Groups [B60C 23/00381](#) and [B60C 23/003](#) should be considered in order to perform a complete search.

N B60C 23/0039 . . . {specially adapted for driven wheels}

WARNING

Group [B60C 23/0039](#) is incomplete pending reclassification of documents from group [B60C 23/003](#).

Groups [B60C 23/0039](#) and [B60C 23/003](#) should be considered in order to perform a complete search.

U B60C 23/02 . Signalling devices actuated by tyre pressure {(hand-held tyre pressure gauges [G01L 17/00](#))}

U B60C 23/04 . . mounted on the wheel or tyre

U B60C 23/0491 . . . {Constructional details of means for attaching the control device}

U B60C 23/0496 . . . {Valve stem attachments positioned outside of the tyre chamber}

C B60C 23/0498 . . . {for rim attachments ([B60C 23/0494](#), [B60C 23/0496](#) take precedence)}

WARNING

Group [B60C 23/0498](#) is impacted by reclassification into group [B60C 23/04985](#).

Groups [B60C 23/0498](#) and [B60C 23/04985](#) should be considered in order to perform a complete search.

- N B60C 23/04985 {using straps surrounding the rims}
- WARNING
 Group [B60C 23/04985](#) is incomplete pending reclassification of documents from group [B60C 23/0498](#).
 Groups [B60C 23/04985](#) and [B60C 23/0498](#) should be considered in order to perform a complete search.

- U B60C 23/06 . Signalling devices actuated by deformation of the tyre, {e.g. tyre mounted deformation sensors or indirect determination of tyre deformation based on wheel speed, wheel-centre to ground distance or inclination of wheel axle}
- U B60C 23/08 . . by touching the ground
- U B60C 23/085 . . . {putting directly into action an audible signal}
- M B60C 23/10 . Arrangements of tyre-inflating pumps mounted on vehicles ~~{(B60C 23/001 takes precedence)}~~
- U B60C 23/105 . . {the pump being mounted in the saddle-pillar of a bicycle}
- C B60C 23/12 . . operated by a running wheel

WARNING

Group [B60C 23/12](#) is impacted by reclassification into groups [B60C 23/121](#) - [B60C 23/137](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B60C 23/121 . . . {the pumps being mounted on the tyres}
- WARNING
 Groups [B60C 23/121](#) – [B60C 23/124](#) are incomplete pending reclassification of documents from group [B60C 23/12](#).
 Groups [B60C 23/121](#) – [B60C 23/124](#) and [B60C 23/12](#) should be considered in order to perform a complete search.

- N B60C 23/123 {Elongate peristaltic pumps}
- N B60C 23/124 {Bladders}
- N B60C 23/126 . . . {the pumps being mounted on the wheel rims}

WARNING

Group [B60C 23/126](#) is incomplete pending reclassification of documents from group [B60C 23/12](#).

Groups [B60C 23/126](#) and [B60C 23/12](#) should be considered in order to perform a complete search.

- N B60C 23/127 . . . {the pumps being mounted on the hubs}

WARNING

Group [B60C 23/127](#) is incomplete pending reclassification of documents from group [B60C 23/12](#).

Groups [B60C 23/127](#) and [B60C 23/12](#) should be considered in order to perform a complete search.

- N B60C 23/129 . . . {the pumps being mounted on wheel spokes}

WARNING

Group [B60C 23/129](#) is incomplete pending reclassification of documents from group [B60C 23/12](#).

Groups [B60C 23/129](#) and [B60C 23/12](#) should be considered in order to perform a complete search.

- N B60C 23/131 • • • {activated by force of gravity}
- WARNING
Group [B60C 23/131](#) is incomplete pending reclassification of documents from group [B60C 23/12](#).
Groups [B60C 23/131](#) and [B60C 23/12](#) should be considered in order to perform a complete search.
- N B60C 23/133 • • • {activated by centrifugal force}
- WARNING
Group [B60C 23/133](#) is incomplete pending reclassification of documents from group [B60C 23/12](#).
Groups [B60C 23/133](#) and [B60C 23/12](#) should be considered in order to perform a complete search.
- N B60C 23/135 • • • {activated due to tyre deformation}
- WARNING
Group [B60C 23/135](#) is incomplete pending reclassification of documents from group [B60C 23/12](#).
Groups [B60C 23/135](#) and [B60C 23/12](#) should be considered in order to perform a complete search.
- N B60C 23/137 • • • {comprising cam driven pistons}
- WARNING
Group [B60C 23/137](#) is incomplete pending reclassification of documents from group [B60C 23/12](#).
Groups [B60C 23/137](#) and [B60C 23/12](#) should be considered in order to perform a complete search.
- U B60C 23/14 • • operated by the prime mover of the vehicle
- M B60C 23/16 • Arrangements of air tanks mounted on vehicles-~~{(B60C 23/001 takes precedence)}~~

Project: MP0439 (B60Q)**M B60Q ARRANGEMENT OF SIGNALLING OR LIGHTING DEVICES, THE MOUNTING OR SUPPORTING THEREOF OR CIRCUITS THEREFOR, FOR VEHICLES IN GENERAL**NOTES

1. This subclass also covers the operation and control of lighting devices, for example:
 - arrangement or adaptation of lighting switches or signal-initiating means for vehicles.
 - control of lighting devices in relation to the vehicle as a whole, e.g. for levelling, swivelling or aiming.
2. This subclass does not cover optical, mechanical, thermal or electrical arrangement of elements within lighting devices, which are covered by groups [F21S 41/00](#) – [F21S 45/00](#).
3. Attention is drawn to the Note following the title of class [B60](#).
4. Attention is drawn to the following places:
5.

B60K 28/00	Safety devices, e.g. sleeping driver
B60R 25/00	Anti-theft
B62D	Driving assistance
B62D 15/02	Steering aids

B60K 31/0008	Cruise control
G01S	Infrared night vision
G01S 13/931	Anti-collision
G05D 1/00	Automatic pilot
G06K 9/00	Pattern recognition
G06T 3/00	Image transformation
G06T 5/00	Image enhancement
G06T 7/00	Image analysis
G08B 21/00	Alarms in general
G08G	Traffic control
G08G 1/16	Anti-collision systems
H04N	Television systems

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

B60Q 1/128	covered by	B60Q 1/124
B60Q 1/132	covered by	B60Q 1/124
B60Q 1/136	covered by	B60Q 1/124

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (B60W)

M B60W

CONJOINT CONTROL OF VEHICLE SUB-UNITS OF DIFFERENT TYPE OR DIFFERENT FUNCTION; CONTROL SYSTEMS SPECIALLY ADAPTED FOR HYBRID VEHICLES; ROAD VEHICLE DRIVE CONTROL SYSTEMS FOR PURPOSES NOT RELATED TO THE CONTROL OF A PARTICULAR SUB-UNIT

NOTES

1. This subclass does not cover the control of a single sub-unit; such control is classified in the relevant place for the sub-unit, e.g. [F02D](#), [F16H](#). Where a single sub-unit is controlled by means of signals or commands from other sub-units, the control of this single sub-unit is classified in the relevant place for this sub-unit. For example, the control of variable-ratio gearing by means of signals from the engine or the accelerator is classified in the subclass for gearing, [F16H](#).
2. Conjoint control of driveline units, e.g. engines, and variable-ratio gearing occurring only transiently during ratio shift and being also characterised by the control of the gearing is also classified in the subclass for gearing, [F16H](#).
3. In groups [B60W 20/00](#) - [B60W 50/00](#), the first place priority rule is applied, i.e. at each hierarchical level, classification is made in the first appropriate place.
4. When classifying in group [B60W 10/00](#), classification must also be made in groups [B60W 20/00](#) - [B60W 50/00](#) in order to identify the purpose or use of the control.
5. In this subclass, the following terms are used with the meanings indicated:
 - "conjoint control" means that a programmed or condition-responsive {main} automatic controller on board the vehicle, embodying control logic for vehicle sub-units of different type or different function, sends control signals to actuators of two or more vehicle sub-units, so that the sub-units act together to solve a particular problem or in response to a particular driving condition, {in order to improve stability, comfort or safety by managing the global dynamics of the vehicle};
 - "drive control system" means an electronic system on board a road vehicle for automatically controlling the movement {by managing the

global dynamics} of that vehicle in order to take certain actions{in order to improve stability, comfort or safety};

- "road vehicle" means a motorised vehicle for transportation on roads, e.g. an automobile, truck or bus;
- "autonomous road vehicle" means a road vehicle capable of controlling all dynamic driving tasks without human intervention during a plurality of driving scenarios by using on-board computer hardware and software to execute decision making processes in real-time.
- "sub-unit" means one of the following vehicle systems: {driveline systems, e.g.} propulsion system, clutch system, change-speed gearing system, system for distributing drive torque between front and rear axles, axle differential system, brake system, steering system, suspension system, {and, particularly for hybrid vehicles,} energy storage means, fuel cells, or auxiliary equipment.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0587 (B63B)

- M B63B 21/00** Tying-up; Shifting, towing, or pushing equipment; Anchoring (~~{of buoys B63B 22/04;}~~ dynamic anchoring [B63H 25/00](#) {; equipment for shipping on coasts, in harbours or on other fixed marine structures, e.g. for landing purposes, [E02B](#)})
- WARNING**
Group [B63H 21/00](#) is no longer used for classification of adaptations of ropes, hawsers, or the like, or parts thereof. Documents are in the process of being reorganised to [B63B 21/20](#)
- M B63B 21/20** • Adaptations of chains, ropes, hawsers, or the like, or of parts thereof ~~chains, ropes or hawsers in general, see the relevant subclasses, e.g. F16G (or D07B)~~
- U B63B 21/24** • Anchors
- M B63B 21/243** • • {foldable or capable of being disassembled (*Anchors with two or more foldable flukes B63B 21/36*)}
- M B63B 27/00** ~~Loading or unloading~~ *Arrangement of ship-based loading or unloading equipment for* cargo or passengers (self-discharging barges or lighters [B63B 35/30](#); ~~shore-based B65G {elevators, escalators or moving walkways per se B66B; floating cranes B66C 23/52; loading or unloading devices per se, see the relevant subclasses, e.g. B65G, B66C, B67D}~~)
- D B63B 27/02** • {with intermittent action}
<administratively transferred to [B63B 27/19](#)>
- M B63B 27/04** • ~~Ships' derricks of derricks~~ {, i.e. employing ships' masts-} (~~derricks in general B66C~~)
- M B63B 27/06** • • {with slewing force exerted at pivoted end}
- M B63B 27/08** • ~~using of~~ winches (~~winches per se B66D~~)
- M B63B 27/10** • ~~using of~~ cranes (~~cranes per se B66C~~)
- M B63B 27/12** • • of gantry type
- M B63B 27/14** • ~~Ramps; Gangways or other outboard ladders of ramps, gangways or outboard ladders~~ {(inboard ladders [B63B 29/20](#) {-; land-based bridges giving access to ships [E01D 15/24](#)}); {Pilot lifts}
- M B63B 2027/141** • • {telescopically extendable}
- M B63B 27/143** • • {Ramps}

M	B63B 2027/145	• • • {Inflatable ramps}
M	B63B 27/146	• • {Pilot ladders or similar outboard ladders, e.g. bathing ladders; Pilot lifts}
M	B63B 2027/148	• • • {Pilot lifts}
M	B63B 27/16	• • using lifts or hoists {(elevators per se B66B {Pilot lifts B63B 27/14}) pilot lifts B63B 27/146)}
M	B63B 2027/165	• • {Deployment or recovery of underwater vehicles using lifts or hoists}
M	B63B 27/18	• • using cableways, e.g. with breeches-buoys (cableways per se B65G)
N	B63B 27/19	• {Other loading or unloading equipment involving an intermittent action, not provided in groups B63B 27/04 - B63B 27/18 }
D	B63B 27/20	• {with continuous action} <administratively transferred to B63B 27/29 >
M	B63B 27/22	• • of conveyors conveyers , e.g. of endless-belt or screw-type {(arrangements of devices with throwing action B63B 27/26; arrangements of chutes B63B 27/28; conveyors per se B65G)}
M	B63B 27/24	• • Loading or unloading fluids of pipe-lines
M	B63B 27/25	• • {Arrangement of ship-based loading or unloading equipment} for fluidised bulk material
M	B63B 27/26	• • using devices with throwing action (devices with throwing action per se B65G)
M	B63B 27/28	• • using chutes (chutes per se B65G)
N	B63B 27/29	• {Other loading or unloading equipment involving a continuous action, not provided in groups B63B 27/22 - B63B 27/28 }
M	B63B 27/36	• {Arrangement of ship-based loading or unloading equipment} for floating cargo {(devices for facilitating retrieval of floating objects per se B66C 13/02 deployment or recovery of underwater vehicles using lifts of hoists B63B 27/16)}
U	B63B 35/00	Vessels or similar floating structures specially adapted for specific purposes and not otherwise provided for WARNING Group B63B 35/00 is impacted by reclassification into groups A63B 69/0093 , B63B 32/00 - B63B 32/87 , B63B 34/00 , B63B 34/10 , B63B 34/15 , B63B 34/30 , B63B 34/45 - B63B 34/565 , B63B 34/70 , B63B 34/75 , B63H 8/23 , B63H 8/24 , B63H 8/25 , B63H 8/50 - B63H 8/70 and E04H 4/0006 . All groups listed in this Warning should be considered in order to perform a complete search.
M	B63B 35/08	• Ice-breakers; {or other vessels or floating structures for operation in ice-infested waters; Ice-breakers, or other vessels or floating structures having equipment specially adapted therefor} NOTE {Documents Subject matter concerning vessels, or floating structures adapted at the same time for an other another particular purpose are also classified in the respective other particular groups of B63B 35/00 , e.g. floating buildings, stores, drilling platforms or workshops for operation in ice infested waters are also classified in B63B 35/44 .
M	B63B 59/00	Hull protection peculiar to specially adapted for vessels; Cleaning devices peculiar to vessels and integral therewith specially adapted for vessels {(cleaning of vehicles in general B60S; other cleaning in general B08B; inhibiting corrosion of metals by anodic or cathodic protection C23F 13/00)}

N **B63B 2201/00 - B63B 2241/00** ***Indexing schemes associated with subclasses [B63B](#), [B63C](#), [B63G](#), [B63H](#) and [B63J](#), relating to aspects of particular or unusual use, materials, design, methods or means.***

M **B63B 2205/00** **Tether**~~Tethers~~

- M B63B 2205/02 • ~~Having~~ **Tether** payout means
- M B63B 2205/04 • • ~~Having means to control~~ **comprising means for controlling** payout
- M B63B 2205/06 • • ~~Reel for tether~~ **Reels for tethers**
- M B63B 2205/08 • with means for recovering ~~the sunken object~~ **submerged objects**

U **B63B 2241/00** **Design characteristics**

- U B63B 2241/02 • Design characterised by particular shapes
- U B63B 2241/04 • • by particular cross sections
- M B63B 2241/06 • • • ~~Circular cross sections~~ **circular**
- M B63B 2241/08 • • • ~~Polygonal cross sections~~ **polygonal**

Project: RP0587 (B63C)

U **B63C 7/00** **Salvaging of disabled, stranded, or sunken vessels; Salvaging of vessel parts or furnishings, e.g. of safes; Salvaging of other underwater objects (means for searching for underwater objects [B63C 11/48](#))**

- M B63C 7/006 • **{Emptying the contents of sunken, stranded, or disabled vessels, e.g. by engaging the vessel; {Emptying the contents of sunken, stranded, or disabled vessels, e.g. by engaging the vessel, or collecting underwater buoyant, e.g. liquid or particulate, or gaseous contents [Underwater collecting of buoyant contents, such as liquid, particulate or gaseous contents](#), escaping from sunken vessels, e.g. using funnels, or tents for recovery of escaping hydrocarbons ([cleaning](#) **Cleaning** or keeping clear the surface of open water in general [E02B 15/00](#))}**

U **B63C 11/00** **Equipment for dwelling or working underwater; Means for searching for underwater objects (composition of chemical substances for use in breathing apparatus [A62D 9/00](#); swimming aids or equipment [A63B 31/00](#) - [A63B 35/00](#); submarines [B63G 8/00](#))**

- M B63C 11/34 • Diving chambers ~~{for underwater vessels, e.g. unmanned,}~~ with mechanical link, e.g. cable, to a base (manipulators [B25J](#); {externally attached cofferdams and the like [B63B 17/0018](#);-} diving chambers without mechanical link to a base [B63G 8/00](#); caissons adapted to laying foundations [E02D 23/00](#) - [E02D 27/00](#))
- U B63C 11/36 • • of closed type
- M B63C 11/42 • • • with independent propulsion or direction control-~~{(underwater vessels adapted for special purposes [B63G 8/001](#))}~~

Project: RP0587 (B63G)

U **B63G 8/00** **Underwater vessels, e.g. submarines; {Equipment specially adapted therefor}(submarine hulls [B63B 3/13](#); diving chambers with mechanical link, e.g. cable, to a base [B63C 11/34](#); divers' sleds [B63C 11/46](#); torpedoes [F42B 19/00](#))**

- M B63G 8/001 • {Underwater vessels adapted for special purposes, e.g. unmanned; underwater vessels; Equipment specially adapted therefor, e.g. docking stations (self-propelled or direction controlled diving chambers with mechanical link to a base [B63C 11/42](#))}
- M B63G 8/36 • Adaptations of ventilation-~~{, {e.g. schnorkels,} cooling, heating, or air-conditioning (reconditioning air in sealed chambers [A62B 11/00](#); for vessels in general [B63J 2/00](#); air-conditioning in general [F24F](#))}~~

Project: RP0587 (B63H)

U	B63H 5/00	Arrangements on vessels of propulsion elements directly acting on water
U	B63H 5/07	• of propellers (forming part of outboard units {or Z-drives} B63H 20/00)
M	B63H 5/125	<ul style="list-style-type: none"> • movably mounted with respect to hull, e.g. adjustable in direction {, e.g. podded azimuthing thrusters} ({outboard units or Z-drives B63H 20/00; } movably mounted for steering purposes only, {rudders carrying propellers} B63H 25/42) <p>WARNING Group B63H 5/125 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B63H 5/1252	<ul style="list-style-type: none"> • {the ability to move being conferred by gearing in transmission between prime mover and propeller and the propulsion unit being other than in a "Z" configuration} <p>WARNING Group B63H 5/1252 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B63H 2005/1254	<ul style="list-style-type: none"> • {Podded azimuthing thrusters, i.e. podded thruster units arranged inboard for rotation about vertical axis} <p>WARNING Group B63H 2005/1254 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B63H 2005/1256	<ul style="list-style-type: none"> • {with mechanical power transmission to propellers} <p>WARNING Group B63H 2005/1256 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B63H 2005/1258	<ul style="list-style-type: none"> • {with electric power transmission to propellers, i.e. with integrated electric propeller motors} <p>WARNING Group B63H 2005/1258 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28. All groups listed in this Warning should be considered in order to perform a complete search.</p>
U	B63H 9/00	Marine propulsion provided directly by wind power (wind-motors driving underwater propulsive elements B63H 13/00)
U	B63H 9/04	<ul style="list-style-type: none"> • using sails or like wind-catching surfaces (sail or rigging arrangements specially adapted for water sports boards, e.g. for windsurfing or kitesurfing B63H 8/00) <p>WARNING Group B63H 9/04 is incomplete pending reclassification of documents from groups A63C 5/11, B60K 16/00, B60K 2016/006 and B62B 15/00 - B62B 15/005.</p>


Group [B63H 9/04](#) is also impacted by reclassification into groups [B63H 8/00](#) - [B63H 8/70](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U B63H 9/08

- Connections of sails to masts, spars, or the like

M B63H 2009/086

- • {by sliders, i.e. by shoes sliding in, or guided by channels, tracks or rails;  for connecting luffs, leeches, battens, or the like to masts, spars or booms}

M B63H 20/00

Outboard propulsion units, e.g. outboard motors or Z-drives; Arrangements thereof on vessels

WARNING

Group [B63H 20/00](#) is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 20/001

- {Arrangements, apparatus and methods for handling fluids used in outboard drives (for handling exhaust gas [B63H 20/24](#); for handling cooling-water [B63H 20/28](#); cooling outboard marine engines [F01P 3/202](#); air intakes for outboard marine engines [F02M 35/167](#))}

WARNING

Group [B63H 20/001](#) is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 20/002

- • {for handling lubrication liquids (in engines, e.g. outboard marine engines, [F01M](#))}

WARNING

Group [B63H 20/002](#) is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 2020/003

- {Arrangements of two, or more outboard propulsion units}

WARNING

Group [B63H 2020/003](#) is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 2020/005

- {Arrangements of two or more propellers, or the like on single outboard propulsion units}

WARNING

Group [B63H 2020/005](#) is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 2020/006

- • {of coaxial type, e.g. of counter-rotative type}

WARNING

Group [B63H 2020/006](#) is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B63H 20/007
- {Trolling propulsion units (trolling plates for slowing down [B63H 25/50](#); dynamo-electric machines of trolling units [H02K](#))}

WARNING

Group B63H 20/007 is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B63H 2020/008
- {Tools, specially adapted for maintenance, mounting, repair, or the like of outboard propulsion units, e.g. of outboard motors or Z-drives}

WARNING

Group B63H 2020/008 is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B63H 20/02
- Mounting of propulsion units ([B63H 20/08](#) takes precedence)

WARNING

Group B63H 20/02 is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B63H 2020/025
- {Sealings specially adapted for mountings of outboard drive units; Arrangements thereof, e.g. for transom penetrations}

WARNING

Group B63H 2020/025 is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B63H 20/04
- in a well

WARNING

Group B63H 20/04 is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B63H 20/06
- on an intermediate support

WARNING

Group B63H 20/06 is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M B63H 20/08
- Means enabling movement of the position of the propulsion element, e.g. for trim, tilt or steering; Control of trim or tilt (initiating means for steering [B63H 25/02](#))

WARNING

Group B63H 20/08 is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 20/10

- Means enabling trim or tilt, or lifting of the propulsion element when an obstruction is hit; Control of trim or tilt

WARNING

Group B63H 20/10 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 2020/103

- {using a flexible member for enabling or controlling tilt or lifting, e.g. a cable}

WARNING

Group B63H 2020/103 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 20/106

- {Means enabling lifting of the propulsion element in a substantially vertical, linearly sliding movement}

WARNING

Group B63H 20/106 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 20/12

- Means enabling steering

WARNING

Group B63H 20/12 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 20/14

- Transmission between propulsion power unit and propulsion element

WARNING

Group B63H 20/14 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 2020/145

- {comprising means for permitting telescoping movement of components of the outboard propulsion unit, e.g. telescoping movement of power leg}

WARNING

Group B63H 2020/145 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 20/16

- allowing movement of the propulsion element in a horizontal plane only, e.g. for steering

WARNING

Group B63H 20/16 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.

All groups listed in this Warning should be considered in order to perform a complete search.

- | | |
|------------------|--|
| M B63H 20/18 | <ul style="list-style-type: none"> • allowing movement of the propulsion element about a longitudinal axis, e.g. the through transom shaft (B63H 20/22 takes precedence) <p><u>WARNING</u>
 <i>Group B63H 20/18 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
 All groups listed in this Warning should be considered in order to perform a complete search.</i></p> |
| M B63H 20/20 | <ul style="list-style-type: none"> • with provision for reverse drive <p><u>WARNING</u>
 <i>Group B63H 20/20 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
 All groups listed in this Warning should be considered in order to perform a complete search.</i></p> |
| M B63H 20/22 | <ul style="list-style-type: none"> • allowing movement of the propulsion element about at least a horizontal axis without disconnection of the drive, e.g. using universal joints <p><u>WARNING</u>
 <i>Group B63H 20/22 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
 All groups listed in this Warning should be considered in order to perform a complete search.</i></p> |
| M B63H 20/24 | <ul style="list-style-type: none"> • {Arrangements, apparatus and methods for handling exhaust gas in outboard drives, e.g.} exhaust gas outlets {(in engines, e.g. outboard marine engines, F01N)} <p><u>WARNING</u>
 <i>Group B63H 20/24 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
 All groups listed in this Warning should be considered in order to perform a complete search.</i></p> |
| M B63H 20/245 | <ul style="list-style-type: none"> • {Exhaust gas outlets (B63H 20/26 takes precedence)} <p><u>WARNING</u>
 <i>Group B63H 20/245 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
 All groups listed in this Warning should be considered in order to perform a complete search.</i></p> |
| M B63H 20/26 | <ul style="list-style-type: none"> • {Exhaust gas outlets} passing through the propeller or its hub <p><u>WARNING</u>
 <i>Group B63H 20/26 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
 All groups listed in this Warning should be considered in order to perform a complete search.</i></p> |
| M B63H 20/28 | <ul style="list-style-type: none"> • {Arrangements, apparatus and methods for handling cooling-water in outboard drives, e.g.} cooling-water intakes {(cooling circuits for outboard marine engines F01P 3/202)} <p><u>WARNING</u>
 <i>Group B63H 20/28 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
 All groups listed in this Warning should be considered in order to perform a complete search.</i></p> |

- | | |
|--------------------|---|
| M B63H 20/285 | <ul style="list-style-type: none"> • • {Cooling-water intakes (B63H 20/28 takes precedence)} <div style="background-color: #ffffcc; padding: 10px; margin-top: 5px;"> <p><u>WARNING</u></p> <p>Group B63H 20/285 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
All groups listed in this Warning should be considered in order to perform a complete search.</p> </div> |
| M B63H 20/30 | <ul style="list-style-type: none"> • • {Cooling-water intakes} for flushing {(circuits for flushing outboard marine engines F01P 3/205)} <div style="background-color: #ffffcc; padding: 10px; margin-top: 5px;"> <p><u>WARNING</u></p> <p>Group B63H 20/30 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
All groups listed in this Warning should be considered in order to perform a complete search.</p> </div> |
| M B63H 20/32 | <ul style="list-style-type: none"> • • Housings {(air intakes for outboard engines F02M 35/167)} <div style="background-color: #ffffcc; padding: 10px; margin-top: 5px;"> <p><u>WARNING</u></p> <p>Group B63H 20/32 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
All groups listed in this Warning should be considered in order to perform a complete search.</p> </div> |
| M B63H 2020/323 | <ul style="list-style-type: none"> • • {Gear cases} <div style="background-color: #ffffcc; padding: 10px; margin-top: 5px;"> <p><u>WARNING</u></p> <p>Group B63H 2020/323 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
All groups listed in this Warning should be considered in order to perform a complete search.</p> </div> |
| M B63H 2020/326 | <ul style="list-style-type: none"> • • • {having a dividing plane substantially in plane with the axes of the transmission shafts} <div style="background-color: #ffffcc; padding: 10px; margin-top: 5px;"> <p><u>WARNING</u></p> <p>Group B63H 2020/326 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
All groups listed in this Warning should be considered in order to perform a complete search.</p> </div> |
| M B63H 20/34 | <ul style="list-style-type: none"> • • comprising stabilising fins {, foils, anticavitation plates, splash plates, or rudders (rudders carrying propellers B63H 25/42; rudders carrying jets B63H 25/46)} <div style="background-color: #ffffcc; padding: 10px; margin-top: 5px;"> <p><u>WARNING</u></p> <p>Group B63H 20/34 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
All groups listed in this Warning should be considered in order to perform a complete search.</p> </div> |
| M B63H 20/36 | <ul style="list-style-type: none"> • Transporting or testing stands {(hand carts for transporting outboard units B62B; measuring torque G01L 3/00, measuring thrust of propellers G01L 5/133, testing in general G01M); Use of outboard propulsion units as pumps}; Protection of power legs {, e.g. when not in use} <div style="background-color: #ffffcc; padding: 10px; margin-top: 5px;"> <p><u>WARNING</u></p> <p>Group B63H 20/36 is incomplete pending reclassification of documents from groups B63H 21/26, B63H 21/265, and B63H 21/28.
All groups listed in this Warning should be considered in order to perform a complete search.</p> </div> |

U B63H 21/00

Use of propulsion power plant or units on vessels

NOTE

This group comprises arrangements of propulsion power plant or units on vessels and to some extent it includes adaptations of such plant or units to facilitate such arrangements

U B63H 21/24

- {the vessels being small craft, e.g. racing boats}

F B63H 21/26
(Frozen)

- • {of outboard type; Outboard propulsion power units movably installed for steering, reversing, tilting, or the like (transom panels for outboard motors for inflatable boats [B63B 7/087](#); floating propeller units [B63B 35/665](#))}

WARNING

Group [B63H 21/26](#) and subgroups ~~are~~ is no longer used for ~~classification~~. Documents are in the process the classification of documents as of of being reorganised to May 1, 2020.

The content of this group is being reclassified into groups [B63H 5/125](#), and subgroups [B63H 5/1252](#), [B63H 2005/1254](#), ~~to~~ [B63H 2005/1256](#), [B63H 2005/1258](#), [B63H 20/00](#), and subgroups [B63H 20/001](#), [B63H 20/002](#), and ~~to~~ [B63H 2020/003](#), [B63H 2020/005](#), [B63H 2020/006](#), [B63H 20/007](#), [B63H 2020/008](#), [B63H 20/02](#), [B63H 2020/025](#), [B63H 20/04](#), [B63H 20/06](#), [B63H 20/08](#), [B63H 20/10](#), [B63H 2020/103](#), [B63H 20/106](#), [B63H 20/12](#), [B63H 20/14](#), [B63H 2020/145](#), [B63H 20/16](#), [B63H 20/18](#), [B63H 20/20](#), [B63H 20/22](#), [B63H 20/24](#), [B63H 20/245](#), [B63H 20/26](#), [B63H 20/28](#), [B63H 20/285](#), [B63H 20/30](#), [B63H 20/32](#), [B63H 2020/323](#), [B63H 2020/326](#), [B63H 20/34](#), [B63H 20/36](#), [B63H 25/42](#), and [B63H 2025/425](#).

All groups listed in this Warning should be considered in order to perform a complete search.

F B63H 21/265
(Frozen)

- • • {Steering or control devices for outboards (steering by rudders [B63H 25/06](#); control handles for boats [B63H 21/213](#))}

WARNING

Group [B63H 21/265](#) is no longer used for the classification of documents as of May 1, 2020.

The content of this group is being reclassified into groups [B63H 5/125](#), [B63H 5/1252](#), [B63H 2005/1254](#), [B63H 2005/1256](#), [B63H 2005/1258](#), [B63H 20/00](#), [B63H 20/001](#), [B63H 20/002](#), [B63H 2020/003](#), [B63H 2020/005](#), [B63H 2020/006](#), [B63H 20/007](#), [B63H 2020/008](#), [B63H 20/02](#), [B63H 2020/025](#), [B63H 20/04](#), [B63H 20/06](#), [B63H 20/08](#), [B63H 20/10](#), [B63H 2020/103](#), [B63H 20/106](#), [B63H 20/12](#), [B63H 20/14](#), [B63H 2020/145](#), [B63H 20/16](#), [B63H 20/18](#), [B63H 20/20](#), [B63H 20/22](#), [B63H 20/24](#), [B63H 20/245](#), [B63H 20/26](#), [B63H 20/28](#), [B63H 20/285](#), [B63H 20/30](#), [B63H 20/32](#), [B63H 2020/323](#), [B63H 2020/326](#), [B63H 20/34](#), [B63H 20/36](#), [B63H 25/42](#), and [B63H 2025/425](#).

All groups listed in this Warning should be considered in order to perform a complete search.

F B63H 21/28
(Frozen)

- • • {Arrangements of transmission between propulsion power unit and propulsive element}

WARNING

Group [B63H 21/28](#) is no longer used for the classification of documents as of May 1, 2020.

The content of this group is being reclassified into groups [B63H 5/125](#), [B63H 5/1252](#), [B63H 2005/1254](#), [B63H 2005/1256](#), [B63H 2005/1258](#), [B63H 20/00](#), [B63H 20/001](#), [B63H 20/002](#), [B63H 2020/003](#), [B63H 2020/005](#), [B63H 2020/006](#), [B63H 20/007](#), [B63H 2020/008](#), [B63H 20/02](#), [B63H 2020/025](#), [B63H 20/04](#), [B63H 20/06](#), [B63H 20/08](#), [B63H 20/10](#), [B63H 2020/103](#), [B63H 20/106](#), [B63H 20/12](#), [B63H 20/14](#), [B63H 2020/145](#),

B63H 20/16, B63H 20/18, B63H 20/20, B63H 20/22, B63H 20/24, B63H 20/245, B63H 20/26, B63H 20/28, B63H 20/285, B63H 20/30, B63H 20/32, B63H 2020/323, B63H 2020/326, B63H 20/34, B63H 20/36, B63H 25/42, and B63H 2025/425.

All groups listed in this Warning should be considered in order to perform a complete search.

U B63H 25/00 **Steering; Slowing-down otherwise than by use of propulsive elements (using movably-installed outboard propulsion units [B63H 20/00](#)); Dynamic anchoring, i.e. positioning vessels by means of main or auxiliary propulsive elements**

M B63H 25/42 • Steering or dynamic anchoring by propulsive elements (by jets [B63H 25/46](#)); Steering or dynamic anchoring by propellers used therefor only; Steering or dynamic anchoring by rudders carrying propellers

WARNING

Group [B63H 25/42](#) is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M B63H 2025/425 • {Propulsive elements, other than jets, substantially used for steering or dynamic anchoring only, with means for retracting, or otherwise moving to a rest position outside the water flow around the hull}

WARNING

Group [B63H 2025/425](#) is incomplete pending reclassification of documents from groups [B63H 21/26](#), [B63H 21/265](#), and [B63H 21/28](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0263-F (B64C)

U B64C 13/00 **Control systems or transmitting systems for actuating flying-control surfaces, lift-increasing flaps, air brakes, or spoilers**

U B64C 13/02 • Initiating means

M B64C 13/04 • • actuated personally

WARNING

Group [B64C 13/04](#) is impacted by reclassification into groups [B64C 13/042](#), [B64C 13/0421](#), [B64C 13/0423](#), [B64C 13/0425](#), [B64C 13/0427](#), and [B64C 13/044](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M B64C 13/042 • • • {operated by hand}

WARNING

Groups [B64C 13/042](#), [B64C 13/0421](#), [B64C 13/0423](#), [B64C 13/0425](#), and [B64C 13/0427](#) are incomplete pending reclassification of documents from groups [B64C 13/04](#), [B64C 13/06](#), [B64C 13/08](#), [B64C 13/10](#), [B64C 13/12](#), and [B64C 13/14](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M	B64C 13/044	<ul style="list-style-type: none"> • • {operated by feet, e.g. pedals} <p><u>WARNING</u> Group B64C 13/044 is incomplete pending reclassification of documents from groups B64C 13/04, B64C 13/06, B64C 13/08, B64C 13/10, B64C 13/12, and B64C 13/14. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/06	<ul style="list-style-type: none"> • • adjustable to suit individual persons <p><u>WARNING</u> Group B64C 13/06 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/08	<ul style="list-style-type: none"> • • Trimming zero positions <p><u>WARNING</u> Group B64C 13/08 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/10	<ul style="list-style-type: none"> • • comprising warning devices <p><u>WARNING</u> Group B64C 13/10 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/12	<ul style="list-style-type: none"> • • Dual control apparatus <p><u>WARNING</u> Group B64C 13/12 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/14	<ul style="list-style-type: none"> • • lockable (locking in position to suit individual persons B64C 13/06) <p><u>WARNING</u> Group B64C 13/14 is impacted by reclassification into groups B64C 13/042, B64C 13/0421, B64C 13/0423, B64C 13/0425, B64C 13/0427, and B64C 13/044. All groups listed in this Warning should be considered in order to perform a complete search.</p>
U	B64C 13/24	<ul style="list-style-type: none"> • Transmitting means
U	B64C 13/26	<ul style="list-style-type: none"> • • without power amplification or where power amplification is irrelevant
M	B64C 13/28	<ul style="list-style-type: none"> • • mechanical <p><u>WARNING</u> Groups B64C 13/28, B64C 13/30, B64C 13/32, and B64C 13/34 are impacted by reclassification into groups B64C 13/341, B64C 13/343, and B64C 13/345.</p>

All groups listed in this Warning should be considered in order to perform a complete search.

- M B64C 13/341 • • • {having duplication or stand-by provisions}

WARNING

Group B64C 13/341 is incomplete pending reclassification of documents from groups B64C 13/28, B64C 13/30, B64C 13/32, B64C 13/34, B64C 13/42, B64C 13/44, and B64C 13/46.
All groups listed in this Warning should be considered in order to perform a complete search.

- M B64C 13/343 • • • {overriding of personal controls; with automatic return to inoperative position}

WARNING

Group B64C 13/343 is incomplete pending reclassification of documents from groups B64C 13/28, B64C 13/30, B64C 13/32, B64C 13/34, B64C 13/42, B64C 13/44, and B64C 13/46.
All groups listed in this Warning should be considered in order to perform a complete search.

- M B64C 13/345 • • • {with artificial feel}

WARNING

Group B64C 13/345 is incomplete pending reclassification of documents from groups B64C 13/28, B64C 13/30, B64C 13/32, B64C 13/34, B64C 13/42, B64C 13/44, and B64C 13/46.
All groups listed in this Warning should be considered in order to perform a complete search.

- U B64C 13/38 • • with power amplification

- M B64C 13/40 • • • using fluid pressure

WARNING

Group B64C 13/40 is impacted by reclassification into groups B64C 13/504, B64C 13/505, B64C 13/506, and B64C 13/507.
All groups listed in this Warning should be considered in order to perform a complete search.

- M B64C 13/42 • • • having duplication or stand-by provisions

WARNING

Group B64C 13/42 is impacted by reclassification into groups B64C 13/341, B64C 13/343, B64C 13/345, B64C 13/504, B64C 13/505, B64C 13/506, and B64C 13/507.
All groups listed in this Warning should be considered in order to perform a complete search.

- M B64C 13/44 • • • overriding of personal controls; with automatic return to inoperative position

WARNING

Group B64C 13/44 is impacted by reclassification into groups B64C 13/341, B64C 13/343, B64C 13/345, B64C 13/504, B64C 13/505, B64C 13/506, and B64C 13/507.
All groups listed in this Warning should be considered in order to perform a complete search.

M	B64C 13/46	<ul style="list-style-type: none"> • • • with artificial feel <p><u>WARNING</u> Group B64C 13/46 is impacted by reclassification into groups B64C 13/341, B64C 13/343, B64C 13/345, B64C 13/504, B64C 13/505, B64C 13/506, and B64C 13/507. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/50	<ul style="list-style-type: none"> • • • using electrical energy <p><u>WARNING</u> Group B64C 13/50 is impacted by reclassification into groups B64C 13/504, B64C 13/505, B64C 13/506, and B64C 13/507. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/503	<ul style="list-style-type: none"> • • • {Fly-by-Wire} <p><u>WARNING</u> Group B64C 13/503 is impacted by reclassification into groups B64C 13/504, B64C 13/505, B64C 13/506, and B64C 13/507. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/504	<ul style="list-style-type: none"> • • • {using electro-hydrostatic actuators [EHA's]} <p><u>WARNING</u> Group B64C 13/504 is incomplete pending reclassification of documents from groups B64C 13/40, B64C 13/42, B64C 13/44, B64C 13/46, B64C 13/50, and B64C 13/503. Group B64C 13/504 is also impacted by reclassification into groups B64C 13/505, B64C 13/506, and B64C 13/507. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/505	<ul style="list-style-type: none"> • • • {having duplication or stand-by provisions} <p><u>WARNING</u> Group B64C 13/505 is incomplete pending reclassification of documents from groups B64C 13/40, B64C 13/42, B64C 13/44, B64C 13/46, B64C 13/50, and B64C 13/503. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/506	<ul style="list-style-type: none"> • • • {overriding of personal controls; with automatic return to inoperative position} <p><u>WARNING</u> Group B64C 13/506 is incomplete pending reclassification of documents from groups B64C 13/40, B64C 13/42, B64C 13/44, B64C 13/46, B64C 13/50, and B64C 13/503. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B64C 13/507	<ul style="list-style-type: none"> • • • {with artificial feel} <p><u>WARNING</u> Group B64C 13/507 is incomplete pending reclassification of documents from groups B64C 13/40, B64C 13/42, B64C 13/44, B64C 13/46, B64C 13/50, and B64C 13/503.</p>

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0440-F (B65B)

- U B65B 11/00** Wrapping, e.g. partially or wholly enclosing, articles or quantities of material, in strips, sheets or blanks, of flexible material (bundling articles by applying narrow strips or bands of flexible material [B65B 13/00](#))
- U B65B 11/50** • Enclosing articles, or quantities of material, by disposing contents between two sheets, e.g. pocketed sheets, and securing their opposed free margins (apparatus or devices for forming pockets in or from sheets, blanks or webs [B65B 47/00](#))
- M B65B 11/52** • • one sheet being rendered plastic, e.g. by heating, and forced by fluid pressure, e.g. vacuum, into engagement with the other sheet and contents, e.g. skin- {, blister-, or bubble-} packaging

WARNING

Group B65B 11/52 is incomplete pending reclassification of documents from group B65B 33/00.
Groups B65B 33/00 and B65B 11/52 should be considered in order to perform a complete search.

Project: RP0326-F (B65B)

- U B65B 29/00** Packaging of materials presenting special problems
- M B65B 29/02** • Packaging of substances, e.g. tea, which are intended to be infused in the package

WARNING

Group B65B 29/02 is impacted by reclassification into groups B65B 29/022, B65B 29/025, and B65B 29/028.
Groups B65B 29/02 and B65B 29/022, B65B 29/025 and B65B 29/028 should be considered in order to perform a complete search.

- M B65B 29/022** • • {packaging infusion material into capsules}

WARNING

Group B65B 29/022 is incomplete pending reclassification of documents from group B65B 29/02.
Groups B65B 29/02 and B65B 29/022 should be considered in order to perform a complete search

- M B65B 29/025** • • {packaging infusion material into pods}

WARNING

Group B65B 29/025 is incomplete pending reclassification of documents from group B65B 29/02.
Groups B65B 29/02 and B65B 29/025 should be considered in order to perform a complete search.

- M B65B 29/028** • • {packaging infusion material into filter bags}

WARNING

Group B65B 29/028 is incomplete pending reclassification of documents from group B65B 29/02.
Groups B65B 29/02 and B65B 29/028 should be considered in order to perform a complete search.

Project: RP0440-F (B65B)

M B65B 33/00 **Packaging articles by applying removable, e.g. strippable, coatings**
(B65B 11/52 takes precedence)

WARNING

Group B65B 33/00 is impacted by reclassification into group B65B 11/52.
 Groups B65B 33/00 and B65B 11/52 should be considered in order to perform a complete search.

Project: RP0128 (B65D)

U B65D 33/00 **Details of, or accessories for, sacks or bags**

U B65D 33/16 • End- or aperture-closing arrangements or devices (valves of valve bags {B65D 31/14} ; removable stoppers or caps B65D 39/00, B65D 41/00; closures of filled bags B65D 77/10; closing filled bags in association with packaging B65B 7/00, B65B 51/00)

U B65D 33/25 • • Riveting; Dovetailing; Screwing; using press buttons or slide fasteners

T B65D 33/2508 • • • {using slide fasteners with interlocking members having a substantially uniform section throughout the length of the fastener ~~and operated without a slider~~; *Sliders therefor*}

WARNING

*Groups B65D 33/2508 - B65D 33/259 are incomplete pending reclassification of documents from group B65D 33/2591.
 Groups B65D 33/2508 - B65D 33/259 and B65D 33/2591 should be considered in order to perform a complete search.*

T B65D 33/2516 • • • • {comprising tamper-indicating means, e.g. located within the fastener *(provided in the slider B65D 33/2585)*}

U B65D 33/2575 • • • • {the slide fastener providing access to the bag through a bag wall, e.g. intended to be cut open by the consumer}

T B65D 33/2583 • • • • • {the slide fastener being attached to one wall only}

N B65D 33/2584 • • • • • {characterized by the slider}

N B65D 33/2585 • • • • • {being provided with tamper-indicating means}

N B65D 33/2586 • • • • • {being provided with a separating plow}

N B65D 33/25865 • • • • • • {reaching between the interlocking fastener profiles}

N B65D 33/2587 • • • • • • {the slider being made out of a plurality of pieces}

N B65D 33/2588 • • • • • • {being provided with flexing or moving parts}

N B65D 33/2589 • • • • • {Bag or slide fastener details cooperating with the slider, e.g. details for removing or installing the slider}

N B65D 33/259 • • • • • • {End stops}

F B65D 33/2591
(Frozen) • • • {using slide fasteners with interlocking members having a substantially uniform section throughout the length of the fastener and operated with a slider}

WARNING

*Group B65D 33/2591 is no longer used for the classification of documents as of February 1, 2020.
 The content of this group is being reclassified into groups B65D 33/2508 - B65D 33/259.
 All groups listed in this Warning should be considered in order to perform a complete search.*

- C B65D 33/34
- with special means for indicating unauthorised opening {(B65D 33/2516 takes, B65D 33/2585 take precedence)}
- WARNING**
Group B65D 33/34 is impacted by reclassification into group B65D 33/2585. Groups B65D 33/34 and B65D 33/2585 should be considered in order to perform a complete search.
- C B65D 57/00
- Internal frames or supports for flexible articles, e.g. stiffeners; Separators for articles packaged in stacks or groups, e.g. for preventing adhesion of sticky articles {(B65D 71/70 takes precedence)}**
- WARNING**
Group B65D 57/00 is impacted by reclassification into groups B65D 57/00 - B65D 57/006.
All groups listed in this Warning should be considered in order to perform a complete search.
- N B65D 57/002
- {Separators for articles packaged in stacks or groups, e.g. stacked or nested}
- WARNING**
Groups B65D 57/002 – B65D 57/006 are incomplete pending reclassification of documents from group B65D 57/00.
Groups B65D 57/002 – B65D 57/006 and B65D 57/00 should be considered in order to perform a complete search.
- N B65D 57/003
- {for horizontally placed articles, i.e. for stacked or nested articles}
- N B65D 57/004
- {the articles being substantially flat panels, e.g. wooden planks}
- N B65D 57/005
- {Separators for vertically placed articles}
- N B65D 57/006
- {the articles being substantially flat panels, e.g. wooden planks or photovoltaic panels}
- U B65D 79/00
- Kinds or details of packages, not otherwise provided for**
- C B65D 79/005
- {~~Containers or closures~~ Packages having deformable parts for indicating or neutralising internal pressure-variations neutralizing internal pressure-variations by other means than venting}
- WARNING**
Group B65D 79/005 is impacted by reclassification into groups B65D 79/005 - B65D 79/0087.
All groups listed in this Warning should be considered in order to perform a complete search.
- N B65D 79/008
- {the deformable part being located in a rigid or semi-rigid container, e.g. in bottles or jars}
- WARNING**
Groups B65D 79/008 – B65D 79/0084 are incomplete pending reclassification of documents from group B65D 79/005.
Groups B65D 79/008 – B65D 79/0084 and B65D 79/005 should be considered in order to perform a complete search.
- N B65D 79/0081
- {in the bottom part thereof}
- N B65D 79/0084
- {in the sidewall or shoulder part thereof}
- N B65D 79/0087
- {the deformable part being located in a closure, e.g. in caps or lids}
- WARNING**
Group B65D 79/0087 is incomplete pending reclassification of documents from group B65D 79/005.

Groups [B65D 79/0087](#) and [B65D 79/005](#) should be considered in order to perform a complete search.

- U B65D 81/00** Containers, packaging elements, or packages, for contents presenting particular transport or storage problems, or adapted to be used for non-packaging purposes after removal of contents
- D B65D 2081/001 • {for packaging articles or materials intended to be mixed or infused with a liquid without having previously been removed from the package}
<administratively transferred to [B65D 85/804](#)>
- D B65D 2081/002 • • {Packages adapted to be totally immersed in the liquid to release part or all of their contents, e.g. tea bags}
<administratively transferred to [B65D 85/808](#)>
- D B65D 2081/004 • • • {with special features facilitating their manipulation or suspension (B65D 2081/005 takes precedence)}
<administratively transferred to [B65D 85/812](#)>
- D B65D 2081/005 • • • {characterised by an outer package, e.g. wrappers or boxes for enclosing tea-bags}
<administratively transferred to [B65D 85/8085](#)>
- D B65D 2081/007 • • {Packages adapted to allow liquid to pass through the contents (B65D 2081/002 takes precedence)}
<administratively transferred to [B65D 85/8043](#)>
- D B65D 2081/008 • • {Packages adapted to be filled with the liquid and to retain the resulting preparation, e.g. cups prefilled with coffee powder or trays containing dehydrated food}
<administratively transferred to [B65D 85/816](#)>
- M B65D 85/00** Containers, packaging elements or packages, specially adapted for particular articles or materials ([B65D 71/00](#), [B65D 83/00](#) take precedence; hand implements or travelling equipment [A45C](#); cosmetic or toilet equipment [A45D](#); packages for surgical knives, scalpels or blades therefor [A61B 17/3215](#); containers specially adapted for medical or pharmaceutical purposes [A61J 1/00](#); paint cans [B44D 3/12](#); oil cans [F16N 3/04](#); containers for carrying small arms [F41C 33/06](#); packaging of ammunition or explosive charges [F42B 39/00](#); containers for record carriers, specially adapted for cooperation with the recording or reproducing apparatus [G11B 23/00](#))

NOTE

Attention is drawn to Note (45) following the title of this subclass.

Project: RP0518 (B65D)

- U B65D 85/07 • for compressible or flexible articles (for wearing apparel [B65D 85/18](#))
- U B65D 85/08 • • rod-shaped or tubular
- U B65D 85/10 • • • for cigarettes
- U B65D 85/1036 • • • • {Containers formed by erecting a rigid or semi-rigid blank}
- C B65D 85/1045 • • • • • {having a cap-like lid hinged to an edge}

WARNING

Group [B65D 85/1045](#) is impacted by reclassification into groups [B65D 85/1048](#), [B65D 85/10484](#), [B65D 85/1056](#), [B65D 85/10564](#), [B65D 85/10566](#), and [B65D 85/10568](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N B65D 85/1048 {characterized by the shape of the container}
- WARNING
Groups [B65D 85/1048](#) and [B65D 85/10484](#) are incomplete pending reclassification of documents from groups [B65D 85/1045](#) and [B65D 85/1054](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B65D 85/10484 {having rounded corners}
- C B65D 85/1054 {combined with an outer sleeve connected to the lid}
- WARNING
Group [B65D 85/1054](#) is impacted by reclassification into groups [B65D 85/1048](#), [B65D 85/10484](#), [B65D 85/1056](#), [B65D 85/10564](#), [B65D 85/10566](#), and [B65D 85/10568](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B65D 85/1056 {characterized by the lid}
- WARNING
Group [B65D 85/1056](#) - [B65D 85/10568](#) are incomplete pending reclassification of documents from groups [B65D 85/1045](#) and [B65D 85/1054](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B65D 85/10564 {having means for holding the lid in a closed position}
- N B65D 85/10566 {having means for holding the lid in an open position}
- N B65D 85/10568 {opening of the lid opens simultaneously an inner package within the container}
- M B65D 85/14 . . . for collapsible **{empty}** tubes

Project: RP0128 (B65D)

- U B65D 85/70 . {for materials not otherwise provided for}
- U B65D 85/804 . Disposable containers or packages with contents which are {mixed,} infused or dissolved *in situ* {, i.e. without having been previously removed from the package ([B65D 65/46](#) takes precedence; tea infusers [A47G 19/16](#); spoons or stirrers comprising beverage additives [A47G 21/04](#))}
- C B65D 85/8043 . . . {Packages adapted to allow liquid to pass through the contents ([B65D 85/808](#) takes precedence; ~~coffee filters not used as packages~~ [A47J 31/00](#); *filters or reusable cartridges for coffee or tea makers, not used as packages* [A47J 31/06](#))}
- WARNING
Group [B65D 85/8043](#) is impacted by reclassification into groups [B65D 85/8043](#) and [B65D 85/8049](#) - [B65D 85/8067](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B65D 85/8046 . . . {Pods, i.e. closed containers made only of filter paper or similar material}
- WARNING
Group [B65D 85/8046](#) is impacted by reclassification into groups [B65D 85/8046](#) - [B65D 85/8067](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N B65D 85/8049 . . . {Details of the inlet}
- WARNING
Group [B65D 85/8049](#) is incomplete pending reclassification of documents from groups [B65D 85/8043](#) and [B65D 85/8046](#).
Groups [B65D 85/8043](#), [B65D 85/8046](#), and [B65D 85/8049](#) should be considered in order to perform a complete search.
- N B65D 85/8052 . . . {Details of the outlet}
- WARNING
Group [B65D 85/8052](#) is incomplete pending reclassification of documents from groups [B65D 85/8043](#) and [B65D 85/8046](#).
Groups [B65D 85/8043](#), [B65D 85/8046](#), and [B65D 85/8052](#) should be considered in order to perform a complete search.
- N B65D 85/8055 . . . {Means for influencing the liquid flow inside the package}
- WARNING
Group [B65D 85/8055](#) is incomplete pending reclassification of documents from groups [B65D 85/8043](#) and [B65D 85/8046](#).
Groups [B65D 85/8043](#), [B65D 85/8046](#), and [B65D 85/8055](#) should be considered in order to perform a complete search.
- N B65D 85/8058 . . . {Coding means for the contents}
- WARNING
Group [B65D 85/8058](#) is incomplete pending reclassification of documents from groups [B65D 85/8043](#) and [B65D 85/8046](#).
Groups [B65D 85/8043](#), [B65D 85/8046](#), and [B65D 85/8058](#) should be considered in order to perform a complete search.
- N B65D 85/8061 . . . {Filters}
- WARNING
Group [B65D 85/8061](#) is incomplete pending reclassification of documents from groups [B65D 85/8043](#) and [B65D 85/8046](#).
Groups [B65D 85/8043](#), [B65D 85/8046](#), and [B65D 85/8061](#) should be considered in order to perform a complete search.
- N B65D 85/8064 . . . {Sealing means for the interface with the processing machine}
- WARNING
Group [B65D 85/8064](#) is incomplete pending reclassification of documents from groups [B65D 85/8043](#) and [B65D 85/8046](#).
Groups [B65D 85/8043](#), [B65D 85/8046](#), and [B65D 85/8064](#) should be considered in order to perform a complete search.
- N B65D 85/8067 . . . {Packages for several ingredients}
- WARNING
Group [B65D 85/8067](#) is incomplete pending reclassification of documents from groups [B65D 85/8043](#) and [B65D 85/8046](#).
Groups [B65D 85/8043](#), [B65D 85/8046](#), and [B65D 85/8067](#) should be considered in order to perform a complete search.
- M B65D 85/84 . . for corrosive chemicals

NOTE

Attention is drawn to Note (11) following the Subclass Index

Project: RP0603 (B65D)

- D B65D 2101/00 Tamper-indicating means (relating to aerosol containers B65D 83/224)**
<administratively transferred to [B65D 2401/00](#) ADD>
- D B65D 2101/0007 • Tearable non-integral strips
 <administratively transferred to [B65D 2401/05](#) ADD>
- D B65D 2101/0015 • Tearable part of the container (B65D 2101/0092 takes precedence)
 <administratively transferred to [B65D 2401/10](#) ADD>
- D B65D 2101/0023 • Tearable part of the closure (B65D 2101/0092 takes precedence)
 <administratively transferred to [B65D 2401/15](#) ADD>
- D B65D 2101/003 • • Frangible elements completely enclosed in closure skirt (tear-off strips B65D 2101/0038)
 <administratively transferred to [B65D 2401/20](#) ADD>
- D B65D 2101/0038 • • Non-metallic tear-off strips
 <administratively transferred to [B65D 2401/25](#) ADD>
- D B65D 2101/0046 • • Tamper-ring remaining connected to closure after initial removal
 <administratively transferred to [B65D 2401/30](#) ADD>
- D B65D 2101/0053 • • Vertical or axial lines of weakness
 <administratively transferred to [B65D 2401/35](#) ADD>
- D B65D 2101/0061 • • Bridges having different cross-sections
 <administratively transferred to [B65D 2401/40](#) ADD>
- D B65D 2101/0069 • Windows in external skirts for viewing tamper-element
 <administratively transferred to [B65D 2401/45](#) ADD>
- D B65D 2101/0076 • Tamper-band co-operating with intermediate ring connected to the container
 <administratively transferred to [B65D 2401/50](#) ADD>
- D B65D 2101/0084 • based on a change or a contrast in colour
 <administratively transferred to [B65D 2401/55](#) ADD>
- D B65D 2101/0092 • Tearable part both of the container and of the closure
 <administratively transferred to [B65D 2401/60](#) ADD>
- U B65D 2313/00 Connecting or fastening means**
- U B65D 2313/10 • Adhesive or cohesive means for holding the contents attached to the container
- N B65D 2401/00 Tamper-indicating means (relating to aerosol containers [B65D 83/224](#))**
- N B65D 2401/05 • Tearable non-integral strips
- N B65D 2401/10 • Tearable part of the container ([B65D 2401/60](#) takes precedence)
- N B65D 2401/15 • Tearable part of the closure ([B65D 2401/60](#) takes precedence)
- N B65D 2401/20 • • Frangible elements completely enclosed in closure skirt (tear-off strips [B65D 2401/25](#))
- N B65D 2401/25 • • Non-metallic tear-off strips
- N B65D 2401/30 • • Tamper-ring remaining connected to closure after initial removal
- N B65D 2401/35 • • Vertical or axial lines of weakness
- N B65D 2401/40 • • Bridges having different cross-sections
- N B65D 2401/45 • Windows in external skirts for viewing tamper-element
- N B65D 2401/50 • Tamper-band co-operating with intermediate ring connected to the container
- N B65D 2401/55 • based on a change or a contrast in colour

- N B65D 2401/60 • Tearable part both of the container and of the closure

Project: RP0519 (B65G)

M B65G 11/00 Chutes (used as storage devices [B65G 1/02](#))

WARNING

Group B65G 11/00 is incomplete pending reclassification of documents from groups B65G 2812/08, B65G 2812/081, B65G 2812/085, B65G 2812/087, and B65G 2812/088.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B65G 11/02 • of straight form

WARNING

Groups B65G 11/02, B65G 11/023 and B65G 11/026 are incomplete pending reclassification of documents from groups B65G 2812/08, B65G 2812/085, B65G 2812/087, and B65G 2812/088.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B65G 11/04 • for mail in buildings

WARNING

Group B65G 11/04 is incomplete pending reclassification of documents from groups B65G 2812/08, B65G 2812/085, B65G 2812/087, and B65G 2812/088.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B65G 11/06 • of helical or spiral form

WARNING

Groups B65G 11/06, B65G 11/063 and B65G 11/066 are incomplete pending reclassification of documents from groups B65G 2812/08, B65G 2812/085, B65G 2812/086, B65G 2812/087, and B65G 2812/088.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B65G 11/08 • with discontinuous guiding surfaces, e.g. arranged in zigzag or cascade formation

WARNING

Groups B65G 11/08 – B65G 11/088 are incomplete pending reclassification of documents from groups B65G 2812/08, B65G 2812/085, B65G 2812/086, B65G 2812/087, and B65G 2812/088.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B65G 11/10 • flexible

WARNING

Groups B65G 11/10, B65G 11/103 and B65G 11/106 are incomplete pending reclassification of documents from groups B65G 2812/08, B65G 2812/085, B65G 2812/087, and B65G 2812/088.

All groups listed in this Warning should be considered in order to perform a complete search.

M	B65G 11/12	<ul style="list-style-type: none"> • pivotable <p>WARNING Groups <u>B65G 11/12</u>, <u>B65G 11/123</u> and <u>B65G 11/126</u> are incomplete pending reclassification of documents from groups <u>B65G 2812/08</u>, <u>B65G 2812/083</u>, <u>B65G 2812/085</u>, <u>B65G 2812/087</u>, and <u>B65G 2812/088</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B65G 11/14	<ul style="list-style-type: none"> • extensible, e.g. telescopic <p>WARNING Groups <u>B65G 11/14</u>, <u>B65G 11/143</u> and <u>B65G 11/146</u> are incomplete pending reclassification of documents from groups <u>B65G 2812/08</u>, <u>B65G 2812/082</u>, <u>B65G 2812/085</u>, <u>B65G 2812/087</u>, and <u>B65G 2812/088</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B65G 11/16	<ul style="list-style-type: none"> • Interior surfaces; Linings <p>WARNING Groups <u>B65G 11/16</u>, <u>B65G 11/163</u> and <u>B65G 11/166</u> are incomplete pending reclassification of documents from groups <u>B65G 2812/08</u>, <u>B65G 2812/085</u>, <u>B65G 2812/087</u>, and <u>B65G 2812/088</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B65G 11/18	<ul style="list-style-type: none"> • Supports or mountings <p>WARNING Groups <u>B65G 11/18</u>, <u>B65G 11/183</u> and <u>B65G 11/186</u> are incomplete pending reclassification of documents from groups <u>B65G 2812/08</u>, <u>B65G 2812/081</u>, <u>B65G 2812/085</u>, <u>B65G 2812/087</u>, and <u>B65G 2812/088</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B65G 11/20	<ul style="list-style-type: none"> • Auxiliary devices, e.g. for deflecting, controlling speed of, or agitating articles or solids <p>WARNING Groups <u>B65G 11/20</u>, <u>B65G 11/203</u> and <u>B65G 11/206</u> are incomplete pending reclassification of documents from groups <u>B65G 2812/08</u>, <u>B65G 2812/085</u>, <u>B65G 2812/087</u>, and <u>B65G 2812/088</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
U	B65G 2812/00	Indexing codes relating to the kind or type of conveyors
F	B65G 2812/08 (Frozen)	<ul style="list-style-type: none"> • Chutes <p>WARNING Group <u>B65G 2812/08</u> is no longer used for the classification of documents as of May 1, 2020. The content of this groups is being reclassified into <u>B65G 11/00</u> - <u>B65G 11/206</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
F	B65G 2812/081 (Frozen)	<ul style="list-style-type: none"> • Connecting means <p>WARNING Group <u>B65G 2812/081</u> is no longer used for the classification of documents as of May 1, 2020.</p>

*The content of this group is being reclassified into groups B65G 11/00, B65G 11/18, B65G 11/183, and B65G 11/186.
All groups listed in this Warning should be considered in order to perform a complete search.*

- F B65G 2812/082
(Frozen) • • • telescopic

WARNING

*Group B65G 2812/082 is no longer used for the classification of documents as of May 1, 2020.
The content of this group is being reclassified into groups B65G 11/14, B65G 11/143, and B65G 11/146.
All groups listed in this Warning should be considered in order to perform a complete search.*

- F B65G 2812/083
(Frozen) • • • pivoting

WARNING

*Group B65G 2812/083 is no longer used for the classification of documents as of May 1, 2020.
The content of this group is being reclassified into groups B65G 11/12, B65G 11/123, and B65G 11/126.
All groups listed in this Warning should be considered in order to perform a complete search.*

- D B65G 2812/084 • • • Cleaning means
 <administratively transferred to B65G 11/00>

- F B65G 2812/085
(Frozen) • • • characterised by the configuration

WARNING

*Group B65G 2812/085 is no longer used for the classification of documents as of May 1, 2020.
The content of this group is being reclassified into groups B65G 11/00 - B65G 11/206.
All groups listed in this Warning should be considered in order to perform a complete search.*

- F B65G 2812/086
(Frozen) • • • Screw-like chutes

WARNING

*Group B65G 2812/086 is no longer used for the classification of documents as of May 1, 2020.
The content of this group is being reclassified into groups B65G 11/06 - B65G 11/088.
All groups listed in this Warning should be considered in order to perform a complete search.*

- F B65G 2812/087
(Frozen) • • • provided with material moving or braking means

WARNING

*Group B65G 2812/087 is no longer used for the classification of documents as of May 1, 2020.
The content of this group is being reclassified into groups B65G 11/00 - B65G 11/206.
All groups listed in this Warning should be considered in order to perform a complete search.*

- F B65G 2812/088
(Frozen)
- characterised by the material
- WARNING**
*Group B65G 2812/088 is no longer used for the classification of documents as of May 1, 2020.
 The content of this group is being reclassified into groups B65G 11/00 - B65G 11/206.
 All groups listed in this Warning should be considered in order to perform a complete search.*
- D B65G 2812/18
- Conveyors with suspended load-carriers operated by hand or gravity
 <administratively transferred to [B65G 9/00](#)>
- D B65G 2812/182
- load-carriers, rollers therefor
 <administratively transferred to [B65G 9/002](#)>
- D B65G 2812/184
- loading or unloading arrangements
 <administratively transferred to [B65G 9/004](#)>
- D B65G 2812/186
- Arresting, braking or escapement means
 <administratively transferred to [B65G 9/006](#)>
- D B65G 2812/188
- Rails or switches
 <administratively transferred to [B65G 9/008](#)>

Project: MP0439 (B81B)

- M B81B
- MICROSTRUCTURAL DEVICES OR SYSTEMS, e.g. MICROMECHANICAL DEVICES (piezo-electric, electrostrictive or magnetostrictive elements per se [H01L 41/00](#))**

NOTES

1. This subclass does not cover:

- purely electrical or electronic devices per se which are covered by section [H](#), e.g. subclass [H01L](#);
- purely optical devices per se which are covered by subclasses [G02B](#) or [G02F](#);
- essentially two-dimensional structures, e.g. layered products which are covered by subclass [B32B](#);
- chemical or biological structures per se which are covered by section [C](#);
- structures in atomic scale produced by manipulation of single atoms or molecules, which are covered by group [B82B 1/00](#).

2. Devices or systems classified in this subclass are also classified in appropriate subclasses providing for their structural or functional features, if such features are of interest.

3. Attention is drawn to the following places:

- | | |
|----------------------------|---|
| A61K 9/50 | Microcapsules for medicinal preparations |
| B25J 7/00 | Micromanipulators |
| G02B 21/32 | Micromanupulators combined with microscopes |
| G11B 5/127 | Magnetic heads |
| H01P 3/08 | Waveguide microstrips. |

4. In this subclass, local "residual" subgroups, e.g. [B81B 7/0077](#), are used with the following purpose:

When classifying a document which does not fit in any of a set of subgroups with the same dot-level, the document should be classified in the residual group, if present, and not in the group at the hierarchical level one dot above.

In the example, the document shall be classified in [B81B 7/0077](#) and not in [B81B 7/0032](#) as [B81B 7/0077](#) is "residual" to [B81B 7/0035-B81B 7/0074](#)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0443 (C01B)

- U C01B 33/00** **Silicon; Compounds thereof** ({[C01B 6/00](#)}, [C01B 21/00](#), [C01B 23/00](#) take precedence; persilicates [C01B 15/14](#); carbides [C01B 32/956](#))
- U C01B 33/20** • Silicates (persilicates [C01B 15/14](#) {; containing aluminium [C01B 33/26](#)})
- U C01B 33/26** • • Aluminium-containing silicates {, i.e. silico-aluminates}
- U C01B 33/28** • • • {Base exchange silicates, e.g. zeolites (regeneration [B01J 49/00](#))}
- M C01B 33/2807** • • • • {Zeolitic silicoaluminates with a tridimensional crystalline structure possessing molecular sieve properties; Isomorphous compounds wherein a part of the aluminium ore of the silicon present may be replaced by other elements such as gallium, germanium, phosphorus; Preparation of zeolitic molecular sieves from molecular sieves of another type or from preformed reacting mixtures ~~(not used, see subgroups)~~}

Project: MP0439 (C01C)

- M C01C** **AMMONIA; CYANOGEN; COMPOUNDS THEREOF** ({metal hydrides, monoborane, diborane or addition complexes thereof [C01B 6/00](#)}; salts of oxyacids of halogens [C01B 11/00](#); peroxides, salts of peroxyacids [C01B 15/00](#); thiosulfates, dithionites, polythionates [C01B 17/64](#); compounds containing selenium or tellurium [C01B 19/00](#); azides [C01B 21/08](#); {compounds other than ammonia or cyanogen, containing nitrogen, non-metals and optionally metals [C01B 21/082](#)}; metal imides or amides [C01B 21/092](#); nitrites [C01B 21/50](#); {compounds of noble gases [C01B 23/0005](#)}; phosphides [C01B 25/08](#); salts of oxyacids of phosphorus [C01B 25/16](#); compounds containing silicon [C01B 33/00](#); compounds containing boron [C01B 35/00](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0141 (C01G)

- U C01G 53/00** **Compounds of nickel**
- M C01G 53/40** • {Nickelates}

WARNING

Groups C01G 53/40 – C01G 53/70 are not complete pending a reorganisation, see also C01G 53/006 and C01G 53/00

Project: RP0570-C (C02F)

- U C02F 11/00** **Treatment of sludge; Devices therefor**
- U C02F 11/10** • by pyrolysis
- C C02F 11/12** • by de-watering, drying or thickening

WARNING

Group **Groups** [C02F 11/12](#) is ~~C02F 11/128~~ are impacted by reclassification into groups [C02F 11/13](#), [C02F 11/131](#), and [C02F 11/15](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C C02F 11/121
 - • by mechanical de-watering
- C C02F 11/122
 - • • using filter presses (C02F 11/123 takes precedence)
- C C02F 11/123
 - • • using belt or band filters
- C C02F 11/125
 - • • using screw filters
- C C02F 11/126
 - • • using drum filters
- C C02F 11/127
 - • • by centrifugation
- C C02F 11/128
 - • • using batch processes
- M C02F 11/13
 - • by heating

WARNING

Group C02F 11/13 is incomplete pending reclassification of documents from ~~group~~groups C02F 11/12, C02F 11/121, C02F 11/122, C02F 11/123, C02F 11/125, C02F 11/126, C02F 11/127, C02F 11/128, C02F 11/18, and C02F 11/185.

~~Groups~~All C02F 11/12 and ~~groups listed~~ C02F 11/13 in this Warning should be considered in order to perform a complete search.

- M C02F 11/131
 - • • using electromagnetic or ultrasonic waves

WARNING

Group C02F 11/131 is incomplete pending reclassification of documents from ~~group~~groups C02F 11/12, C02F 11/121, C02F 11/122, C02F 11/123, C02F 11/125, C02F 11/126, C02F 11/127, C02F 11/128, C02F 11/18, and C02F 11/185.

~~Groups~~All C02F 11/12 and ~~groups listed~~ C02F 11/131 in this Warning should be considered in order to perform a complete search.

- C C02F 11/14
 - • with addition of chemical agents

WARNING

Group C02F 11/14 is impacted by reclassification into groups C02F 11/143, C02F 11/145, C02F 11/147, and C02F 11/148.

All groups listed in this Warning should be considered in order to perform a complete search.

- M C02F 11/15
 - • ~~By~~by treatment with electric, magnetic or electromagnetic fields; by treatment with ultrasonic waves (for the purpose of heating C02F 11/131)

WARNING

Group C02F 11/15 is incomplete pending reclassification of documents from ~~group~~groups C02F 11/12, C02F 11/121, C02F 11/122, C02F 11/123, C02F 11/125, C02F 11/126, C02F 11/127, C02F 11/128, C02F 11/18, and C02F 11/185.

~~Groups~~All C02F 11/12 and ~~groups listed~~ C02F 11/15 in this Warning should be considered in order to perform a complete search.

- C C02F 11/18
 - by thermal conditioning (by pyrolysis C02F 11/10)

WARNING

Group C02F 11/18 is impacted by reclassification into groups C02F 11/13, C02F 11/131, and C02F 11/15.

All groups listed in this Warning should be considered in order to perform a complete search.

C C02F 11/185

- {by pasteurisation}

WARNING

Group C02F 11/185 is impacted by reclassification into groups C02F 11/13, C02F 11/131, and C02F 11/15.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0141 (C04B)

M C04B 35/00

Shaped ceramic products characterised by their composition {(porous ceramic products [C04B 38/00](#); ceramic articles characterised by particular shape, see the relevant classes, e.g. linings for casting ladles, tundishes, cups or the like [B22D 41/02](#); ceramic substrates for microelectronic semi-conductors [H01L 23/15](#))}; Ceramics compositions (containing free metal bonded to carbides, diamond, oxides, borides, nitrides, silicides, e.g. cermets, or other metal compounds, e.g. oxynitrides or sulfides other than as macroscopic reinforcing agents [C22C](#); {shaping of ceramics [B28B](#)}); Processing powders of inorganic compounds preparatory to the manufacturing of ceramic products {(chemical preparation of powders of inorganic compounds [C01](#); infiltration of sintered ceramic preforms with molten metal [C04B 41/51](#))}

NOTES

1. In this group, in the absence of an indication to the contrary, compositions are classified according to the constituent present in the highest proportion by weight.
2. In this group, magnesium is considered as an alkaline earth metal.
3. In this group, a composite is considered as a sintered material containing more than one phase, where the secondary phases are not resulting from sintering aids
4. In this group, fine ceramics are considered as products having a polycrystalline, fine-grained microstructure, e.g. of dimensions below 100 micrometers.
5. The production of ceramic powder is classified in this group in so far as it relates to the preparation of powder with specific characteristics.
6. In groups [C04B 35/00](#) - [C04B 35/83](#), from 01-01-2005 onwards, the indexing codes of groups [C04B 2235/00](#) - [C04B 2235/9692](#) are used to identify aspects relating to ceramic starting mixtures and sintered ceramic products

WARNING

Attention is drawn to WARNINGS 3 and 4 after subclass title

Project: RP0217 (C04B)

M C04B 35/01

- based on oxide ceramics

WARNING

Groups C04B 35/01 - C04B 35/499 are incomplete pending reclassification of documents from groups C04B 35/80, C04B 35/803, and C04B 35/806.

All groups listed in this Warning should be considered in order to perform a complete search.

M C04B 35/50

- based on rare-earth compounds {(non-oxide rare earth compounds [C04B 35/5156](#))}

WARNING

Groups C04B 35/50 and C04B 35/505 are incomplete pending reclassification of documents from groups C04B 35/80, C04B 35/803, and C04B 35/806.

All groups listed in this Warning should be considered in order to perform a complete search.

- M C04B 35/51
- based on compounds of actinides ({non-oxide actinide compounds [C04B 35/5158](#)}; nuclear fuel materials [G21C 3/62](#))

WARNING

Group [C04B 35/51](#) is incomplete pending reclassification of documents from groups [C04B 35/80](#), [C04B 35/803](#), and [C04B 35/806](#). All groups listed in this Warning should be considered in order to perform a complete search.

- M C04B 35/515
- based on non-oxide ceramics

WARNING

Groups [C04B 35/515](#) - [C04B 35/597](#) are incomplete pending reclassification of documents from groups [C04B 35/80](#), [C04B 35/803](#), and [C04B 35/806](#). All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0141 (C04B)

- U C04B 35/622
- Forming processes; Processing powders of inorganic compounds preparatory to the manufacturing of ceramic products

NOTE

In groups [C04B 35/622](#) and subgroups indexing codes are given for aspects relating to the preparation, properties or mechanical treatment or to heat treatments of green bodies. The codes are chosen from [C04B 2235/60](#) - [C04B 2235/668](#)

- M C04B 35/626
- • Preparing or treating the powders individually or as batches {(pigments for ceramics [C09C 1/0009](#)); preparing or treating macroscopic reinforcing agents for ceramic products, e.g. fibres; mechanical aspects section [B](#)}

WARNING

Groups [C04B 35/62605](#) - [C04B 35/62695](#) are not complete; see also other subgroups of [C04B 35/00](#), e.g. [C04B 35/626](#)

Project: RP0217 (C04B)

- U C04B 35/71
- Ceramic products containing macroscopic reinforcing agents ([C04B 35/66](#) takes precedence {; infiltration of a porous ceramic matrix with a material forming a non-ceramic phase [C04B 41/00](#), reaction infiltration with Si in order to form SiC [C04B 35/573](#), in order to form Si₃N₄ [C04B 35/591](#)})

NOTE

In groups [C04B 35/71](#) - [C04B 35/83](#) the composition of the ceramic products is also classified in groups [C04B 35/01](#) - [C04B 35/597](#)

- U C04B 35/78
- • containing non-metallic materials

- T C04B 35/80
- • Fibres, filaments, whiskers, platelets, or the like ~~{{carbon reinforced with carbon fibres see [C04B 35/83](#)}}~~

WARNING

Group [C04B 35/80](#) is incomplete pending reclassification of documents from groups [C04B 35/803](#) and [C04B 35/806](#). Group [C04B 35/80](#) is also impacted by reclassification into groups [C04B 35/01](#) - [C04B 35/597](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- F C04B 35/803
(Frozen) . . . {The matrix of the ceramic products consisting of oxides only}

WARNING

Group C04B 35/803 is no longer used for the classification of documents as of May 1, 2020.

The content of this group is being reclassified into groups C04B 35/80, C04B 35/01 - C04B 35/597.

All groups listed in this Warning should be considered in order to perform a complete search.

- F C04B 35/806
(Frozen) . . . {The matrix of the ceramic products consisting of non-oxides only}

WARNING

Group C04B 35/806 is no longer used for classification of documents as of May 1, 2020.

The content of this group is being reclassified into groups C04B 35/80, C04B 35/01 - C04B 35/597.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0141 (C04B)

- U C04B 37/00 **Joining burned ceramic articles with other burned ceramic articles or other articles by heating (laminated products B32B, E04C; {soldering and welding materials B23K 35/24})**

NOTE

{In groups C04B 37/00 - C04B 37/04 features relating to interlayers, additional compositional information or further processing are indexed with codes chosen from C04B 2237/00 - C04B 2237/88.}

WARNING

Groups C04B 37/005, C04B 37/006, C04B 37/025 and C04B 37/026 are no longer used for classification as from September 1, 2008. Aspects relating to interlayers are from that date indexed by codes chosen from C04B 2237/02 - C04B 2237/16

- M C04B 37/04 . with articles made from glass

WARNING

Groups C04B 37/042, C04B 37/045 and C04B 37/047 are not complete, see also C04B 37/04

Project: MP0439 (C06B)

- M C06B **EXPLOSIVES OR THERMIC COMPOSITIONS (blasting F42D); MANUFACTURE THEREOF; USE OF SINGLE SUBSTANCES AS EXPLOSIVES (compounds in general C01, C07 or C08; {demolition agents based on cementitious or like materials C04B 41/0009})**

NOTES

1. This subclass covers:

- compositions which are:
 - a. explosive: compositions included are those containing both a fuel and sufficient oxidiser so that, upon initiation, they are capable of undergoing a chemical change of a relatively high rate of speed, resulting in the production of usable force for blasting, firearms, propelling missiles, or the like;

- b. thermic: compositions included have
 - i. a consumable fuel component which consists of any element which is a metal, B, Si, Se or Te, or mixtures, intercompounds, or hydrides thereof; and
 - ii. in combination an oxidant component which is either a metal oxide or a salt (organic or inorganic) capable of yielding a metal oxide on decomposition;
 - c. fuels for rocket engines and intended for reaction with an oxidant, excluding air, in order to provide thrust for motive power purposes;
 - d. for use in affecting the explosion environment, e.g. for neutralising the poisonous gases of explosives, for cooling the explosion gases, or the like;
 - methods or apparatus for preparing or treating such compositions not otherwise provided for;
 - methods of using single substances as explosives.
2. In this subclass, the following term is used with the meaning indicated:
- "nitrated" covers compounds having a nitro group or a nitrate ester group.
3. Methods or apparatus for preparing or treating such compositions are classified according to the particular components of the compositions.
4. In this subclass, the words "based on", with reference to explosive compositions, refer to the explosive ingredient present in the largest proportion by weight
5. In the absence of an indication to the contrary a composition is classified in the last place that provides for an ingredient

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (C06C)

M C06C

**DETONATING OR PRIMING DEVICES; FUSES (ammunition fuzes [F42C](#));
CHEMICAL LIGHTERS; PYROPHORIC COMPOSITIONS**

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (C06D)

M C06D

**MEANS FOR GENERATING SMOKE OR MIST; GAS-ATTACK
COMPOSITIONS; GENERATION OF GAS FOR BLASTING OR PROPULSION
(CHEMICAL PART) (fuels [C10](#))**

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0141 (C07D)

U C07D 455/00

Heterocyclic compounds containing quinolizine ring systems, e.g. emetine alkaloids, protoberberine; Alkylenedioxy derivatives of dibenzo [a, g] quinolizines, e.g. berberine

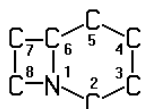
- M C07D 455/03
- containing quinolizine ring systems directly condensed with at least one six-membered carbocyclic ring, e.g. protoberberine; Alkylendioxy derivatives of dibenzo [a, g] quinolizines, e.g. berberine

WARNING

Group C07D 455/03 is temporarily incomplete. See provisionally also other CPC-subgroups of C07D 455/00

M C07D 463/00

Heterocyclic compounds containing 1-azabicyclo [4.2.0] octane ring systems, i.e. compounds containing a ring system of the formula:



, e.g. carbacephalosporins; Such ring systems being further

condensed, e.g. 2,3-condensed with an oxygen-, nitrogen- or sulfur-containing hetero ring

WARNING

The IPC subgroups of C07D 463/00, introduced in the CPC scheme in October 2007, might be temporarily incomplete as a number of documents presently classified in CPC-subgroups of C07D 463/00 still needs reclassification to these IPC-subgroups

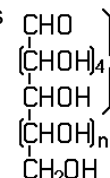
Project: MP0439 (C07H)**M C07H**

SUGARS; DERIVATIVES THEREOF; NUCLEOSIDES; NUCLEOTIDES; NUCLEIC ACIDS (derivatives of aldonic or saccharic acids [C07C](#), [C07D](#); aldonic acids, saccharic acids [C07C 59/105](#), [C07C 59/285](#); cyanohydrins [C07C 255/16](#); glycals [C07D](#); compounds of unknown constitution [C07G](#); polysaccharides, derivatives thereof [C08B](#); DNA or RNA concerning genetic engineering, vectors, e.g. plasmids, or their isolation, preparation or purification [C12N 15/00](#); sugar industry [C13](#))

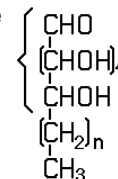
NOTES

1. This subclass covers compounds containing saccharide radicals (see the definitions in Note (3) below).
2. This subclass does not cover polysaccharides which for the purpose of this subclass are defined as having more than five saccharide radicals attached to each other by glycosidic linkages.
3. In this subclass, the following expressions are used with the meanings indicated:
 - "saccharide radical" which is derived from acyclic polyhydroxy-aldehydes or acyclic polyhydroxy-ketones, or from their cyclic tautomers, by removing hydrogen atoms or by replacing hetero bonds to oxygen by the same number of hetero bonds to halogen, nitrogen, sulfur, selenium, or tellurium, in accordance with either of the following definitions:
 - a. It
 - i. consists of an uninterrupted carbon skeleton and oxygen atoms directly attached thereto, and
 - ii. is considered to be terminated by every bond to a carbon atom of a cyclic structure and by every bond to a carbon atom having three bonds to hetero atoms, e.g. ester or nitrile radicals, and
 - iii. contains within the carbon skeleton an unbranched sequence of at the most six carbon atoms in which at least three carbon atoms — at least two in the case of a skeleton having only four carbon atoms — have one single bond to an oxygen atom as the only hetero bond, and

in a cyclic or acyclic sequence, at least one other carbon atom has two single bonds to oxygen atoms as the only hetero bonds, or
in an acyclic sequence, at least one other carbon atom has one double bond to an oxygen atom as the only hetero bond, the said sequence containing at the most one double bond, i.e. C=C or possibly ketalised C=O), in addition to the hetero bonds mentioned above under (A) or (B), e.g. the compounds



an unbranched sequence of at the most six carbon atoms, having bonds to oxygen as defined in this Note



n being an integer, are classified in group [C07H 3/02](#);

- b. It is also a radical derived from a radical as defined in (a) above by replacing at the most four of the specified hetero bonds to oxygen by the same number of hetero bonds to halogen, nitrogen, sulfur, selenium, or tellurium;

- "heterocyclic radical" or "hetero ring" is considered to exclude saccharide radicals as defined above

4. Attention is drawn to Note (3) after class [C07](#), which defines the last place priority rule applied in the range of subclasses [C07C-C07K](#) and within these subclasses.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0443 (C08F)

U C08F 4/00

Polymerisation catalysts

NOTE

{In this group, C-Sets are used. The detailed information about the C-Sets construction and the associated syntax rules is present in the Definitions of [C08F](#).}

U C08F 4/42

- Metals; Metal hydrides; Metallo-organic compounds; Use thereof as catalyst precursors

U C08F 4/44

- selected from light metals, zinc, cadmium, mercury, copper, silver, gold, boron, gallium, indium, thallium, rare earths or actinides

U C08F 4/60

- together with refractory metals, iron group metals, platinum group metals, manganese, rhenium {technetium} or compounds thereof

M C08F 4/60003

- {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond ~~(not used)~~}

NOTE

For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned

atoms except for compounds marked with * where the charge is on the marked atom

- M C08F 4/60006 {Bidentate ligand ~~(not used)~~}
- M C08F 4/60082 {Tridentate ligand ~~(not used)~~}
- M C08F 4/60168 {Tetra- or multi-dentate ligand ~~(not used)~~}
- U C08F 4/62 Refractory metals or compounds thereof
- M C08F 4/62003 {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond ~~(not used)~~}

NOTE

For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom

- M C08F 4/62006 {Bidentate ligand ~~(not used)~~}
- M C08F 4/62082 {Tridentate ligand ~~(not used)~~}
- M C08F 4/62168 {Tetra- or multi-dentate ligand ~~(not used)~~}
- U C08F 4/64 Titanium, zirconium, hafnium or compounds thereof

NOTE

Group [C08F 4/64003](#) takes precedence over groups [C08F 4/642](#) - [C08F 4/659](#)

- M C08F 4/64003 {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond ~~(not used)~~}

NOTE

For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom

- M C08F 4/64006 {Bidentate ligand ~~(not used)~~}
- M C08F 4/64082 {Tridentate ligand ~~(not used)~~}
- M C08F 4/64168 {Tetra- or multi-dentate ligand ~~(not used)~~}
- U C08F 4/68 Vanadium, niobium, tantalum or compounds thereof
- M C08F 4/68008 {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond ~~(not used)~~}

NOTE

For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom

- M C08F 4/68017 {Bidentate ligand ~~(not used)~~}
- M C08F 4/68206 {Tridentate ligand ~~(not used)~~}
- M C08F 4/68422 {Tetra- or multi-dentate ligand ~~(not used)~~}
- U C08F 4/69 Chromium, molybdenum, tungsten or compounds thereof

M	C08F 4/69008	. . . . . {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond (not used) }
		<u>NOTE</u> For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom
M	C08F 4/69017	. . . . . {Bidentate ligand (not used) }
M	C08F 4/69206	. . . . . {Tridentate ligand (not used) }
M	C08F 4/69422	. . . . . {Tetra- or multi-dentate ligand (not used) }
U	C08F 4/70	. . . . Iron group metals, platinum group metals or compounds thereof
M	C08F 4/7001	. . . . . {the metallic compound containing a multidentate ligand, i.e. a ligand capable of donating two or more pairs of electrons to form a coordinate or ionic bond (not used) }
		<u>NOTE</u> For monoanionic compounds, the charge is on the last mentioned atom; for dianionic compounds, the charge is on the first and the last mentioned atoms except for compounds marked with * where the charge is on the marked atom
M	C08F 4/7003	. . . . . {Bidentate ligand (not used) }
M	C08F 4/7039	. . . . . {Tridentate ligand (not used) }
M	C08F 4/708	. . . . . {Tetra- or multi-dentate ligand (not used) }
M	C08F 2410/00	Catalyst preparation (not used)
M	C08F 2420/00	Metallocene catalysts (not used)
U	C08F 2500/00	Characteristics or properties of obtained polymers; Use thereof
		<u>NOTE</u> { C08F 2500/01 - C08F 2500/26 groups only are used in C-Sets as subsequent symbol(s) and are not allocated as single symbol(s). The detailed information about the C-Sets construction and the associated syntax rules is present in the Definitions of C08F .}
M	C08F 2800/00	Copolymer characterised by the proportions of the comonomers expressed (not used)
M	C08F 2810/00	Chemical modification of a polymer (not used)

Project: MP0443 (C08G)

M	C08G 2150/00	Compositions for coatings (not used)
M	C08G 2170/00	Compositions for adhesives (not used)
M	C08G 2330/00	Thermal insulation material (not used)

Project: RP0270 (C08J)

M C08J

WORKING-UP; GENERAL PROCESSES OF COMPOUNDING; AFTER-TREATMENT NOT COVERED BY SUBCLASSES [C08B](#), [C08C](#), [C08F](#), [C08G](#) (mechanical aspects [B29](#); layered products, manufacture thereof [B32B](#); treatment of macromolecular material specially adapted to enhance its filling properties in mortars, concrete or artificial stone [C04B 16/04](#), [C04B 18/20](#), [C04B 20/00](#); treatment of textiles [D06](#))

NOTES

1. This subclass covers processes, not covered by subclasses [C08B](#) - [C08H](#), for treating polymers.

In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place.

2. When classifying in subclass [C08J](#), the treatment of specific polymers is indicated using indexing codes chosen from [C08J 2300/00](#) or subgroups thereof.

Example:

- Preparation of particles of polystyrene by impregnation of the particles with the blowing agent: [C08J 9/18](#) and [C08J 2325/06](#).

3. The use of a polymeric component in minority, e.g. masterbatch, coating, impregnating agent or thin binder is indicated using indexing codes chosen from [C08J 2400/00](#) or subgroups thereof.

Examples:

- Use of PMMA as masterbatch in a polystyrene composition: [C08J 3/226](#) and [C08J 2325/06](#) and [C08J 2433/10](#)
- Bonding of polystyrene by heating: [C08J 5/121](#) and [C08J 2325/06](#)
- Coating of a polyethylene substrate with a polyurethane coating: [C08J 7/0427](#) and [C08J 2323/06](#) and [C08J 2475/04](#)
- Use of ABS as an additive for foamed polyacrylamide : [C08J 9/0061](#) and [C08J 2333/26](#) and [C08J 2455/02](#)

4. In the following subgroups, the codes of [C08J 2300/00](#) - [C08J 2399/00](#) are used to specify:

- [C08J 3/226](#): the polymeric material to which the masterbatch carrier is added.
- [C08J 7/0427](#): the polymeric substrate to be coated.
- [C08J 9/0061](#): the polymeric component in majority in a multicomponents foamable blend.

5. Group [C08J 2400/00](#) was introduced on January 1st, 2012. Patent documents are continuously being reclassified. As a consequence, documents published before 01/01/2012, and to which [C08J 2400/00](#) indexing codes were allocated, are indexed in the corresponding head group.

Example:

- Use of PMMA as masterbatch in a polystyrene composition: [C08J 3/226](#) and [C08J 2325/06](#) and [C08J 2433/00](#), instead of [C08J 2433/10](#).

6. In the following subgroups, the codes of [C08J 2400/00](#) - [C08J 2499/00](#) are used to specify:

- [C08J 3/226](#): the polymeric carrier in a masterbatch.
- [C08J 5/12](#): the chemical nature of the adhesive
- [C08J 7/0427](#): the chemical nature of the coating(s).
- [C08J 9/0061](#): the polymeric component in minority in a multicomponents foamable blend.
- [C08J 9/224](#), [C08J 9/236](#), [C08J 9/36](#), [C08J 9/40](#) and [C08J 9/42](#): the polymer used for coating, binding, or impregnating the foam. [C08J 9/26](#): the polymer to be leached out.
- [C08J 9/33](#) and [C08J 9/35](#): the foam fragments included in the (foamable) polymer matrix.

- in all other subgroups, when the presence of a polymeric component in minority is of relevance.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

C08J 5/14	covered by	B24D 3/22 , B24D 3/28 , F16D 69/02
C08J 5/16	covered by	G10N 2250/18 G10N 2050/14

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (C08K)

M C08K

Use of inorganic or non-macromolecular organic substances as compounding ingredients (paints, inks, varnishes, dyes, polishes, adhesives [C09](#))

NOTES

1. In this subclass, in the absence of an indication to the contrary, an ingredient is classified in the last appropriate place.
2. In this subclass:
 - a mixture of ingredients is classified in the most indented group covering all the essential ingredients of the mixture, e.g.:
 - a mixture of a monohydric and a polyhydric alcohol [C08K 5/05](#)
 - a mixture of two polyhydric alcohols [C08K 5/053](#)
 - a mixture of an alcohol and an ether [C08K 5/04](#)
 - a mixture of an ether and an amine [C08K 5/00](#)
 - a mixture of an amine and a metal [C08K 13/02](#)
 - {This note is applied only for mixtures with more than three essential ingredients. Mixtures with two or three ingredients are classified in the appropriate groups of [C08K](#), e.g. a mixture of Al₂O₃, an ether and an amine is classified in [C08K 3/22](#), [C08K 5/06](#) and [C08K 5/17](#)}
 - ammonium salts are classified in the same way as metal salts
3. In this subclass, any ingredient of a mixture which is not identified by the classification according to Note (2) above, and the use of which is determined to be novel and non-obvious, must also be classified in this subclass according to Note (1). The ingredient can be either a single compound or a composition in itself. "{This IPC Note does not apply in CPC}"
4. Any ingredient of a mixture which is not identified by the classification according to Notes (2) or (3) above, and which is considered to represent information of interest for search, may also be classified in this subclass according to Note (1). This can, for example, be the case when it is considered of interest to enable searching of mixtures using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".{This IPC Note does not apply in CPC}
5. {In this subclass, combination sets [C-Sets] are used. The detailed information about the C-Sets construction and the associated syntax rules is present in the definitions of [C08K](#)}
6. {In this subclass, organic acid salts, alcoholates, phenolates or mercaptides are classified in the groups or subgroups of the parent compounds}

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[C08K 5/5445](#)

covered by

[C08K 5/544](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0443 (C08L)

- U C08L 71/00** Compositions of polyethers obtained by reactions forming an ether link in the main chain (of polyacetals [C08L 59/00](#); of epoxy resins [C08L 63/00](#); of polythioether-ethers [C08L 81/02](#); of polyether-sulfones [C08L 81/06](#)); Compositions of derivatives of such polymers
- NOTE
In this group, C-Sets are used.
The detailed information about the C-Sets construction and the associated syntax rules is present in the Definitions of [C08L](#).
- M C08L 71/08** • Polyethers derived from hydroxy compounds or from their metallic derivatives ([C08L 71/02](#) takes precedence){not used}
- M C08L 71/10** • • from phenols {not used}
- M C08L 2666/00** Composition of polymers characterized by a further compound in the blend, being organic macromolecular compounds, natural resins, waxes or and bituminous materials, non-macromolecular organic substances, inorganic substances or characterized by their function in the composition {not used}
- NOTE
Indexing codes of [C08L 2666/00](#) have not been used for the classification of new documents since April 2012. However, they are used in C-Sets searches for documents prior to April 2012. The detailed information about how to search using [C08L 2666/00](#) C-Sets is presented in the Definitions of [C08L](#), [C09D](#) and [C09J](#).

Project: MP0443 (C09B)

- U C09B 62/00** Reactive dyes, i.e. dyes which form covalent bonds with the substrates or which polymerise with themselves
- M C09B 62/002** • with the linkage of the reactive group being alternatively specified {not used}
- U C09B 62/02** • with the reactive group directly attached to a heterocyclic ring
- M C09B 62/022** • • the heterocyclic ring being alternatively specified {not used}

Project: MP0443 (C09D)

- U C09D 171/00** Coating compositions based on polyethers obtained by reactions forming an ether link in the main chain (based on polyacetals [C09D 159/00](#); based on epoxy resins [C09D 163/00](#); based on polythioether-ethers [C09D 181/02](#); based on polyethersulfones [C09D 181/06](#)); Coating compositions based on derivatives of such polymers
- NOTE
{In this group, C-Sets are used for classification. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions of [C09D](#)}
- M C09D 171/08** • Polyethers derived from hydroxy compounds or from their metallic derivatives ([C09D 171/02](#) takes precedence){not used}
- M C09D 171/10** • • from phenols {not used}

Project: MP0443 (C09J)

- U C09J 171/00** Adhesives based on polyethers obtained by reactions forming an ether link in the main chain (based on polyacetals [C09J 159/00](#); based on epoxy resins [C09J 163/00](#); based on polythioether-ethers [C09J 181/02](#); based on polyethersulfones [C09J 181/06](#)); Adhesives based on derivatives of such polymers

NOTE

{In this group, C-Sets are used for classification. The detailed information about the C-Sets construction and the associated syntax rules are found in the Definitions of [C09J](#)}

- M C09J 171/08** • Polyethers derived from hydroxy compounds or from their metallic derivatives ([C09J 171/02](#) takes precedence){~~not used~~}
- M C09J 171/10** • • from phenols {~~not used~~}

Project: MP0141 (C09K)

- U C09K 5/00** Heat-transfer, heat-exchange or heat-storage materials, e.g. refrigerants; Materials for the production of heat or cold by chemical reactions other than by combustion

- M C09K 5/08** • Materials not undergoing a change of physical state when used ([C09K 5/16](#), [C09K 5/20](#) take precedence)

WARNING

The subgroups of C09K 5/08 might be incomplete as some of the patent documents classified in C09K 5/08 might need reclassification to one or more of groups C09K 5/10 – C09K 5/14

- U C09K 5/16** • Materials undergoing chemical reactions when used
- M C09K 5/18** • • Non-reversible chemical reactions

WARNING

This group might be incomplete as some of the patent documents classified in C09K 5/16 might need reclassification to C09K 5/18

Project: MP0439 (C10C)

- M C10C** WORKING-UP PITCH, ASPHALT, BITUMEN, TAR; PYROLIGNEOUS ACID (compositions of bituminous materials [C08L 95/00](#); carbon filaments by decomposition of organic filaments [D01F 9/14](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0141 (C10G)

- M C10G 3/00** Production of liquid hydrocarbon mixtures from oxygen-containing or organic materials, e.g. fatty oils, fatty acids (production from non-melting solid oxygen-containing carbonaceous materials [C10G 1/00](#); preparation of individual hydrocarbons or mixtures thereof of definite or specified contribution [C07C](#))

WARNING

Groups C10G 3/40-C10G 3/62 are incomplete pending reclassification of documents from group C10G 3/00.
Groups C10G 3/40-C10G 3/62 and C10G 3/00 should be considered in order to perform a complete search.

Project: MP0141 (C10J)

- U C10J 3/00** **Production of combustible gases containing carbon monoxide from solid carbonaceous fuels (destructive distillation processes [C10B](#))**
- M C10J 3/46** • Gasification of granular or pulverulent flues in suspension

WARNING

Groups [C10J 3/463](#), [C10J 3/466](#), [C10J 3/482](#), [C10J 3/485](#), [C10J 3/503](#), [C10J 3/506](#), [C10J 3/523](#) and [C10J 3/526](#) are not complete pending a reorganisation. See also [C10J 3/46](#)

Project: MP0301 (C10L)

- M C10L 10/00** **Use of additives to fuels or fires for particular purposes (additives for liquid carbonaceous fuels characterised by their chemical nature [C10L 1/10](#); using binders for briquetting solid fuels [C10L 5/10](#); using additives to improve the combustion of solid fuels [C10L 9/10](#))**

WARNING

IPC8-subgroups [C10L 10/00](#), introduced in the CPC scheme in June 2006, might be temporarily incomplete as a number of documents presently classified under the main group needs reclassification to these IPC-subgroups

- M C10L 10/06** • for facilitating soot removal

WARNING

Groups [C10L 10/08](#) – [C10L 10/18](#) were introduced in May 2006. These groups might be incomplete as documents, presently classified in [C10L 10/00](#) and [C10L 10/04](#) are in the process of being reclassified to these groups

Project: MP0439 (C10M)

- M C10M** **LUBRICATING COMPOSITIONS (well drilling compositions [C09K 8/02](#)); USE OF CHEMICAL SUBSTANCES EITHER ALONE OR AS LUBRICATING INGREDIENTS IN A LUBRICATING COMPOSITION ({lubricants for medical use [A61](#)}; mould release, i.e. separating, agents for metals [B22C 3/00](#), for plastics or substances in a plastic state, in general [B29C 33/56](#), for glass [C03B 40/02](#); use of particular substances in particular apparatus or conditions, see [F16N](#) or the relevant groups for the application, e.g. [A21D 8/08](#), [B21C 9/00](#), [H01B 3/18](#); immersion oils for microscopy [G02B 21/33](#))**

NOTES

- In this subclass, the following terms are used with the meanings indicated:
 - "lubricant" or "lubricating composition" includes cutting oils, hydraulic fluids, metal drawing compositions, flushing oils, slushing oils, or the like;
 - "aliphatic" includes "cycloaliphatic".
- In respect of the classification of mixtures, attention is drawn to Note (4) (e) below.
- In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place. Thus, a compound having an aromatic ring is classified as aromatic regardless of whether the substituent(s) of interest are on the ring or on an aliphatic part of the molecule.
- In this subclass:
 - metal or ammonium salts of a compound are classified as that compound;
 - salts or adducts formed between two or more organic compounds are classified according to all compounds forming the salt or adduct, if of interest;

- c. a specified compound, e.g. phenols, acids, substituted by a macromolecular hydrocarbon radical is classified as that compound;
 - d. base-materials or thickeners or additives consisting of a mixture for which no specific main group is provided are classified in the most indented group covering all essential constituents of the mixture, for example,
 - a base-material mixture of ketone and amide - group [C10M 105/00](#)
 - a base-material mixture of ketone and ether - group [C10M 105/08](#)
 - an additive mixture of long and short chain esters - group [C10M 129/00](#)
 - an additive mixture of short chain aliphatic and aromatic carboxylic acids- group [C10M 129/26](#);
 - e. except for aqueous lubricating compositions containing more than 10% water, which are classified separately, classification is made according to the type of ingredient or mixture of types of ingredient (base-material, thickener or additive) which characterises the composition. Attention is drawn to the fact that a mixture of essential ingredients characterised by only one of its components, rather than by the mixture as a whole, is not classified as a mixture, e.g. a lubricating composition consisting of:
 - a known base-material and a new additive is classified only in the "additive" part of the classification scheme;
 - a known base-material with both a thickener and a further additive as essential ingredients, which may be individually classified as a mixture of thickener and additive;
 - known base-material with a combination of additives as essential ingredients, which may be individually known or not, is classified in the appropriate place for the additive mixture.
5. In this subclass, it is desirable to add the indexing codes of:
- subclass [C10M](#), relating to the chemical constitution of individual compounds of the lubricating compositions;
 - subclass [C10N](#), relating to physico-chemical aspects of the lubricating compositions or of their compounding ingredients.

For more information about the way of allocating these indexing codes, see the notes after the titles of the respective subclasses.

6. In this subclass, until May 2003, indexing codes were added, relating to:
- each of the essential ingredients of a mixture. However, in the case of an aqueous lubricating composition covered by group [C10M 173/00](#), the presence of water is not indicated;
 - each of the essential reactants of a reaction product covered by groups [C10M 109/02](#), [C10M 121/04](#) or [C10M 159/12](#)

The indexing codes, which are chosen from groups [C10M 101/00](#) - [C10M 109/00](#), [C10M 113/00](#) - [C10M 121/00](#), [C10M 125/00](#) - [C10M 139/00](#), [C10M 143/00](#) - [C10M 155/00](#), [C10M 159/00](#) or [C10M 163/00](#) - [C10M 167/00](#), were given using Combination Sets.

7. In this subclass, until May 2003, the indexing codes of subclass [C10N](#) were added.

Documents classified with Combination Sets according to internal Notes 2), 3) and 5) are in the state of being reclassified according to Note 1).

WARNING

1. The following groups are no longer used for the classification of new documents from January, 1978:

- [C10M 1/00](#) - [C10M 7/00](#)

The backlog of these groups is continuously being reclassified in groups [C10M 101/00](#) - [C10M 177/00](#).

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0443 (C10M)

M C10M 2290/00 Mixtures of base materials or thickeners or additives (**not used, see subgroups**)

Project: RP0270 (C10N)

U C10N 2010/00 Metal present as such or in compounds

NOTE

In this group, metals should be indexed according to their group of the Periodic Table.

T C10N 2010/02 • ~~Group 1~~ Groups 1 or 11

T C10N 2010/04 • ~~Group 2~~ Groups 2 or 12

T C10N 2010/06 • ~~Group 3~~ Groups 3 or 13

T C10N 2010/08 • ~~Group 4~~ Groups 4 or 14

T C10N 2010/10 • ~~Group 5~~ Groups 5 or 15

T C10N 2010/12 • ~~Group 6~~ Groups 6 or 16

C C10N 2010/14 • Group 7

WARNING

Group C10N 2010/14 is impacted by reclassification into group C10N 2010/16. Groups C10N 2010/14 and C10N 2010/16 should be considered in order to perform a complete search.

T C10N 2010/16 • ~~Group 8~~ Groups 8, 9, or 10

WARNING

Group C10N 2010/16 is incomplete pending reclassification of documents from group C10N 2010/14. Groups C10N 2010/14 and C10N 2010/16 should be considered in order to perform a complete search.

T C10N 2020/00 Specified physical **properties** **for chemical properties or characteristics, i.e. function,** of component of lubricating compositions

N C10N 2020/01 • {Physico-chemical properties}

N C10N 2020/011 • • {Cloud point}

N C10N 2020/013 • • {Iodine value}

N C10N 2020/015 • • {Distillation range}

N C10N 2020/017 • • {Specific gravity or density}

N C10N 2020/019 • • {Shear stability}

T C10N 2020/02 • • Viscosity; Viscosity index

T C10N 2020/04 • • Molecular weight; Molecular weight distribution

N C10N 2020/055 • • {Particles related characteristics}

T C10N 2020/06 • • • Particles of special shape or size

N C10N 2020/061 • • • {Coated particles}

N C10N 2020/063 • • • {Fibrous forms}

N C10N 2020/065 • • {Saturated Compounds}

N C10N 2020/067 • • {Unsaturated Compounds}

N C10N 2020/069 • • {Linear chain compounds}

N C10N 2020/071 • • {Branched chain compounds}

N C10N 2020/073 • • {Star shaped polymers}

N	C10N 2020/075	• • {Dendrimers}
N	C10N 2020/077	• • {Ionic Liquids}
N	C10N 2020/079	• • {Liquid crystals}
N	C10N 2020/081	• • {Biodegradable compounds}
N	C10N 2020/083	• • {Volatile compounds}
N	C10N 2020/085	• • {Non-volatile compounds}
N	C10N 2020/09	• {Characteristics associated with water}
N	C10N 2020/091	• • {Water solubility}
N	C10N 2020/093	• • {Insolubility in water}
N	C10N 2020/095	• • {Crystal water containing compounds}
N	C10N 2020/097	• • {Refrigerants}

NOTE

{Indexing codes [C10N 2020/099](#) - [C10N 2020/106](#) are only used in association with group [C10M 171/008](#) to provide information about the specific refrigerant.}

N	C10N 2020/099	• • • {Containing Chlorofluorocarbons}
N	C10N 2020/101	• • • {Containing Hydrofluorocarbons}
N	C10N 2020/103	• • • {Containing Hydrocarbons}
N	C10N 2020/104	• • • {Containing Nitrogen}
N	C10N 2020/105	• • • {Containing Ammonia}
N	C10N 2020/106	• • • {Containing Carbon dioxide}

T C10N 2030/00 Specified physical or chemical **property****properties** which is improved by the additive characterising the lubricating composition, e.g. multifunctional additives

T	C10N 2030/04	• Detergent property or dispersant property
N	C10N 2030/041	• • {Soot induced viscosity control}
U	C10N 2030/06	• Oiliness; Film-strength; Anti-wear; Resistance to extreme pressure
M	C10N 2030/12	• Inhibition of corrosion, e.g. anti-rust agents; or anti-corrosives
T	C10N 2030/16	• Antiseptic; Biocidal {(micro)} biocidal {or bactericidal}
U	C10N 2030/20	• Colour, e.g. dyes
N	C10N 2030/22	• {Degreasing properties}
N	C10N 2030/24	• {Emulsion properties}
N	C10N 2030/26	• {Waterproofing or water resistance}
N	C10N 2030/28	• {Anti-static}
N	C10N 2030/30	• {Anti-misting}
N	C10N 2030/32	• {Light or X-ray resistance}
N	C10N 2030/34	• {Fragrance or deodorizing properties}
N	C10N 2030/36	• {Seal compatibility, e.g. with rubber}
N	C10N 2030/38	• {Catalyst protection, e.g. in exhaust gas converters}
N	C10N 2030/40	• {Low content or no content compositions}
N	C10N 2030/41	• • {Chlorine free or low chlorine content compositions}
N	C10N 2030/42	• • {Phosphor free or low phosphor content compositions}
N	C10N 2030/43	• • {Sulfur free or low sulfur content compositions}
N	C10N 2030/44	• • {Boron free or low content boron compositions}

N	C10N 2030/45	• • {Ash-less or low ash content}
N	C10N 2030/50	• {Emission or smoke controlling properties}
N	C10N 2030/52	• {Base number [TBN]}
N	C10N 2030/54	• {Fuel economy}
N	C10N 2030/56	• {Boundary lubrication or thin film lubrication}
N	C10N 2030/58	• {Elastohydrodynamic lubrication, e.g. for high compressibility layers}
N	C10N 2030/60	• {Electro rheological properties}
N	C10N 2030/62	• {Food grade properties}
N	C10N 2030/64	• {Environmental friendly compositions}
N	C10N 2030/66	• {Hydrolytic stability}
N	C10N 2030/68	• {Shear stability}
N	C10N 2030/70	• {Soluble oils}
N	C10N 2030/72	• {Extended drain}
N	C10N 2030/74	• {Noack Volatility}
N	C10N 2030/76	• {Reduction of noise, shudder, or vibrations}
N	C10N 2030/78	• {Fuel contamination}
U	C10N 2040/00	Specified use or application for which the lubricating composition is intended
U	C10N 2040/04	• Oil-bath; Gear-boxes; Automatic transmissions; Traction drives
N	C10N 2040/042	• • {for automatic transmissions}
N	C10N 2040/044	• • {for manual transmissions}
N	C10N 2040/045	• • {for continuous variable transmission [CVT]}
N	C10N 2040/046	• • {for traction drives}
T	C10N 2040/10	• Running-in oil-oil {; Grinding}
U	C10N 2040/12	• Gas-turbines
U	C10N 2040/13	• • Aircraft turbines
N	C10N 2040/135	• {Steam engines or turbines}
U	C10N 2040/14	• Electric or magnetic purposes
T	C10N 2040/16	• • dielectric Dielectric; Insulating oil {or insulators}
N	C10N 2040/17	• • {for electric contacts}
N	C10N 2040/175	• • {Pantographs, i.e. printing devices}
U	C10N 2040/18	• • in connection with recordings on magnetic tape or disc
N	C10N 2040/185	• • {Magnetic fluids}
U	C10N 2040/20	• Metal working
T	C10N 2040/22	• • with essential removal of material {, e.g. cutting, grinding or drilling}; Cooling oil
T	C10N 2040/24	• • without essential removal of material { Oil for deformation operations, e.g. drawing, rolling, e.g. forming, gorging, drawing, pressing, stamping, rolling or extruding ; Punching metal
N	C10N 2040/241	• • {Manufacturing joint-less pipes}
N	C10N 2040/242	• • {Hot working}
N	C10N 2040/243	• • {Cold working}
N	C10N 2040/244	• • {of specific metals}
N	C10N 2040/245	• • • {Soft metals, e.g. aluminum}
N	C10N 2040/246	• • • {Iron or steel}

N	C10N 2040/247	• • • {Stainless steel}
T	C10N 2040/25	• Internal-combustion engines
N	C10N 2040/251	• • {Alcohol fueled engines}
N	C10N 2040/252	• • {Diesel engines}
N	C10N 2040/253	• • • {Small diesel engines}
N	C10N 2040/255	• • {Gasoline engines}
T	C10N 2040/26	• • • Two-stroke strokes {or two-cycle engines}
T	C10N 2040/28	• • • Rotary {engines}
T	C10N 2040/30	• Refrigerator-lubricant Refrigerators lubricants {or compressors lubricants}
T	C10N 2040/32	• Wire, rope or cable Wires, ropes or cables lubricants
T	C10N 2040/36	• Release agents {or mold release agents}
N	C10N 2040/38	• {Conveyors or chain belts}
N	C10N 2040/40	• {Generators or electric motors in oil or gas winning field}
N	C10N 2040/42	• {Flashing oils or marking oils}
N	C10N 2040/44	• {Super vacuum or supercritical use}
N	C10N 2040/46	• {Textile oils}
N	C10N 2040/48	• {Slushing oils}
N	C10N 2040/50	• {Medical uses}
U	C10N 2050/00	Form in which the lubricant is applied to the material being lubricated
N	C10N 2050/01	• {Emulsions, colloids, or micelles}
N	C10N 2050/011	• • {Oil-in-water}
N	C10N 2050/013	• • {Water-in-oil}
N	C10N 2050/015	• {Dispersions of solid lubricants}
T	C10N 2050/02	• • dissolved or suspended in a carrier which subsequently evaporates to leave a lubricant coating
N	C10N 2050/023	• {Multi-layer lubricant coatings}
N	C10N 2050/025	• • {in the form of films or sheets}
T	C10N 2050/04	• Aerosol Aerosols
T	C10N 2050/08	• solid Solids
T	C10N 2050/10	• semi Semi-solids; greasy
N	C10N 2050/12	• {Micro capsules}
N	C10N 2050/14	• {Composite materials or sliding materials in which lubricants are integrally molded}
T	C10N 2060/00	Chemical after-treatment of the constituents of the lubricating composition
D	C10N 2060/003	• {by organic hydroxy group containing compounds} <administratively transferred to C10N 2060/01 ADD>
D	C10N 2060/006	• {by nitrogen containing compounds} <administratively transferred to C10N 2060/09 ADD>
N	C10N 2060/01	• {by organic hydroxy group containing compounds}
T	C10N 2060/06	• by epoxides epoxydes {or oxyalkylation reactions}
U	C10N 2060/08	• Halogenation
N	C10N 2060/09	• {Treatment with nitrogen containing compounds}
T	C10N 2070/00	Special methods of preparation Specific manufacturing methods for lubricant compositions

N C10N 2070/02 • {Concentrating of additives}

D C10N 2210/00 **Nature of the metal present as such or in compounds, i.e. in salts**

NOTE

Indexing codes C10N 2210/01 – C10N 2210/08 are only to be used as linked codes in combination with codes chosen from subclass C10M identifying the chemical nature of the compounds concerned:

Example: C10M 2201/084 + C10N 2210/02

<administratively transferred to C10N 2010/00 ADD>

- D C10N 2210/01 • Group I, e.g. Li, Na, K, Cs, Cu, Ag, Au
<administratively transferred to [C10N 2010/02](#) ADD>
- D C10N 2210/02 • Group II, e.g. Mg, Ca, Ba, Zn, Cd, Hg
<administratively transferred to [C10N 2010/04](#) ADD>
- D C10N 2210/03 • Group III, e.g. Al, In, La
<administratively transferred to [C10N 2010/06](#) ADD>
- D C10N 2210/04 • Group IV, e.g. Sn, Pb, Ti, Zr
<administratively transferred to [C10N 2010/08](#) ADD>
- D C10N 2210/05 • Group V, e.g. V, As, Sb, Bi
<administratively transferred to [C10N 2010/10](#) ADD>
- D C10N 2210/06 • Group VI, e.g. Cr, Mo, W
<administratively transferred to [C10N 2010/12](#) ADD>
- D C10N 2210/07 • Group VII or VIII
<administratively transferred to [C10N 2010/14](#) ADD>
- D C10N 2210/08 • • Mn, Fe, Co, Ni
<administratively transferred to [C10N 2010/14](#) ADD>

D C10N 2220/00 **Specified physical or chemical properties or characteristics, i.e. function, of single compounds in lubricating compositions**

<administratively transferred to C10N 2020/00 ADD>

- D C10N 2220/02 • Physico-chemical properties
<administratively transferred to [C10N 2020/01](#) ADD>
- D C10N 2220/021 • • Molecular weight
<administratively transferred to [C10N 2020/04](#) ADD>
- D C10N 2220/022 • • Viscosity
<administratively transferred to [C10N 2020/02](#) ADD>
- D C10N 2220/023 • • Cloud point
<administratively transferred to [C10N 2020/011](#) ADD>
- D C10N 2220/024 • • Iodine value
<administratively transferred to [C10N 2020/013](#) ADD>
- D C10N 2220/025 • • Saturated compounds
<administratively transferred to [C10N 2020/065](#) ADD>
- D C10N 2220/026 • • Unsaturated compounds
<administratively transferred to [C10N 2020/067](#) ADD>
- D C10N 2220/027 • • Linear chain compounds
<administratively transferred to [C10N 2020/069](#) ADD>

D	C10N 2220/028	<ul style="list-style-type: none"> • • Branched-chain compounds <administratively transferred to C10N 2020/071 ADD>
D	C10N 2220/029	<ul style="list-style-type: none"> • • Star-shaped polymers <administratively transferred to C10N 2020/073 ADD>
D	C10N 2220/03	<ul style="list-style-type: none"> • • Dendrimers <administratively transferred to C10N 2020/075 ADD>
D	C10N 2220/031	<ul style="list-style-type: none"> • • Distillation range <administratively transferred to C10N 2020/015 ADD>
D	C10N 2220/032	<ul style="list-style-type: none"> • • Specific gravity or density <administratively transferred to C10N 2020/017 ADD>
D	C10N 2220/033	<ul style="list-style-type: none"> • • Shear stability <administratively transferred to C10N 2020/019 ADD>
D	C10N 2220/04	<ul style="list-style-type: none"> • • Ionic liquids <administratively transferred to C10N 2020/077 ADD>
D	C10N 2220/06	<ul style="list-style-type: none"> • • Liquid crystals <administratively transferred to C10N 2020/079 ADD>
D	C10N 2220/08	<ul style="list-style-type: none"> • • Particles related characteristics <administratively transferred to C10N 2020/055 ADD>
D	C10N 2220/082	<ul style="list-style-type: none"> • • • Particle size or shape <administratively transferred to C10N 2020/06 ADD>
D	C10N 2220/084	<ul style="list-style-type: none"> • • • Coated particles <administratively transferred to C10N 2020/061 ADD>
D	C10N 2220/086	<ul style="list-style-type: none"> • • • Fibrous forms <administratively transferred to C10N 2020/063 ADD>
D	C10N 2220/10	<ul style="list-style-type: none"> • • Biodegradable compounds <administratively transferred to C10N 2020/081 ADD>
D	C10N 2220/12	<ul style="list-style-type: none"> • • Volatile compounds <administratively transferred to C10N 2020/083 ADD>
D	C10N 2220/13	<ul style="list-style-type: none"> • • Non-volatile compounds <administratively transferred to C10N 2020/085 ADD>
D	C10N 2220/14	<ul style="list-style-type: none"> • Characteristics associated with water <administratively transferred to C10N 2020/09 ADD>
D	C10N 2220/142	<ul style="list-style-type: none"> • • Water solubility <administratively transferred to C10N 2020/091 ADD>
D	C10N 2220/144	<ul style="list-style-type: none"> • • Insolubility in water <administratively transferred to C10N 2020/093 ADD>
D	C10N 2220/146	<ul style="list-style-type: none"> • • Crystal water containing compounds <administratively transferred to C10N 2020/095 ADD>

D	C10N 2220/30	<ul style="list-style-type: none"> • • Refrigerants <p><u>NOTE</u> Indexing codes C10N 2220/301 – C10N 2220/306 are only used in association with group C10M 171/008 to provide information about the specific refrigerant.</p> <p><administratively transferred to C10N 2020/097 ADD></p>
D	C10N 2220/301	<ul style="list-style-type: none"> • • • Chlorofluorocarbons <p><administratively transferred to C10N 2020/099 ADD></p>
D	C10N 2220/302	<ul style="list-style-type: none"> • • • Hydrofluorocarbons <p><administratively transferred to C10N 2020/101 ADD></p>
D	C10N 2220/303	<ul style="list-style-type: none"> • • • Hydrocarbons <p><administratively transferred to C10N 2020/103 ADD></p>
D	C10N 2220/304	<ul style="list-style-type: none"> • • • Nitrogen <p><administratively transferred to C10N 2020/104 ADD></p>
D	C10N 2220/305	<ul style="list-style-type: none"> • • • Ammonia <p><administratively transferred to C10N 2020/105 ADD></p>
D	C10N 2220/306	<ul style="list-style-type: none"> • • • Carbon-dioxide <p><administratively transferred to C10N 2020/106 ADD></p>
D	C10N 2230/00	<p><u>Specified physical or chemical properties of lubricating compositions</u> <administratively transferred to C10N 2030/00 ADD></p>
D	C10N 2230/02	<ul style="list-style-type: none"> • Viscosity or viscosity index <p><administratively transferred to C10N 2030/02 ADD></p>
D	C10N 2230/04	<ul style="list-style-type: none"> • Detergent properties, e.g. for cleaning, inhibition or removing varnish; Dispersion properties, e.g. for dispersing solids, carbon residues, sludge <p><administratively transferred to C10N 2030/04 ADD></p>
D	C10N 2230/041	<ul style="list-style-type: none"> • • Soot induced viscosity control <p><administratively transferred to C10N 2030/041 ADD></p>
D	C10N 2230/06	<ul style="list-style-type: none"> • Resistance to extreme pressure; Oiliness; Abrasion resistance; Friction; Anti-wear <p><administratively transferred to C10N 2030/06 ADD></p>
D	C10N 2230/08	<ul style="list-style-type: none"> • Resistance to extreme heat; Resistance to extreme temperature <p><administratively transferred to C10N 2030/08 ADD></p>
D	C10N 2230/10	<ul style="list-style-type: none"> • Anti-oxidation characteristics <p><administratively transferred to C10N 2030/10 ADD></p>
D	C10N 2230/12	<ul style="list-style-type: none"> • Resistance to rust or corrosion <p><administratively transferred to C10N 2030/12 ADD></p>
D	C10N 2230/14	<ul style="list-style-type: none"> • Metal deactivation, i.e. passivation <p><administratively transferred to C10N 2030/14 ADD></p>
D	C10N 2230/16	<ul style="list-style-type: none"> • Bactericidal or (micro)biocidal <p><administratively transferred to C10N 2030/16 ADD></p>
D	C10N 2230/18	<ul style="list-style-type: none"> • Defoaming properties <p><administratively transferred to C10N 2030/18 ADD></p>
D	C10N 2230/20	<ul style="list-style-type: none"> • Colour <p><administratively transferred to C10N 2030/20 ADD></p>

D	C10N 2230/22	<ul style="list-style-type: none"> • Degreasing properties <p><administratively transferred to C10N 2030/22 ADD></p>
D	C10N 2230/24	<ul style="list-style-type: none"> • Emulsion properties <p><administratively transferred to C10N 2030/24 ADD></p>
D	C10N 2230/26	<ul style="list-style-type: none"> • Waterproofing or water-resistance <p><administratively transferred to C10N 2030/26 ADD></p>
D	C10N 2230/28	<ul style="list-style-type: none"> • Anti-static <p><administratively transferred to C10N 2030/28 ADD></p>
D	C10N 2230/30	<ul style="list-style-type: none"> • Anti-misting <p><administratively transferred to C10N 2030/30 ADD></p>
D	C10N 2230/32	<ul style="list-style-type: none"> • Light or X-ray resistance <p><administratively transferred to C10N 2030/32 ADD></p>
D	C10N 2230/34	<ul style="list-style-type: none"> • Fragrance or deodorising properties <p><administratively transferred to C10N 2030/34 ADD></p>
D	C10N 2230/36	<ul style="list-style-type: none"> • Seal compatibility, e.g. with rubber <p><administratively transferred to C10N 2030/36 ADD></p>
D	C10N 2230/38	<ul style="list-style-type: none"> • Catalyst protection, e.g. in exhaust gas converters <p><administratively transferred to C10N 2030/38 ADD></p>
D	C10N 2230/40	<ul style="list-style-type: none"> • Low content or no content compositions <p><administratively transferred to C10N 2030/40 ADD></p>
D	C10N 2230/41	<ul style="list-style-type: none"> • • Chlorine free or low chlorine content compositions <p><administratively transferred to C10N 2030/41 ADD></p>
D	C10N 2230/42	<ul style="list-style-type: none"> • • Phosphor free or low phosphor content compositions <p><administratively transferred to C10N 2030/42 ADD></p>
D	C10N 2230/43	<ul style="list-style-type: none"> • • Sulfur free or low sulfur content compositions <p><administratively transferred to C10N 2030/43 ADD></p>
D	C10N 2230/44	<ul style="list-style-type: none"> • • Boron free or low contentn-boron compositions <p><administratively transferred to C10N 2030/44 ADD></p>
D	C10N 2230/45	<ul style="list-style-type: none"> • • Ashless or low ash content <p><administratively transferred to C10N 2030/45 ADD></p>
D	C10N 2230/50	<ul style="list-style-type: none"> • Emission or smoke controlling properties <p><administratively transferred to C10N 2030/50 ADD></p>
D	C10N 2230/52	<ul style="list-style-type: none"> • Base number (TBN) <p><administratively transferred to C10N 2030/52 ADD></p>
D	C10N 2230/54	<ul style="list-style-type: none"> • Fuel economy <p><administratively transferred to C10N 2030/54 ADD></p>
D	C10N 2230/56	<ul style="list-style-type: none"> • Boundary lubrication or thin film lubrication <p><administratively transferred to C10N 2030/56 ADD></p>
D	C10N 2230/58	<ul style="list-style-type: none"> • Elastohydrodynamic lubrication, e.g. for high compressibility layers <p><administratively transferred to C10N 2030/58 ADD></p>
D	C10N 2230/60	<ul style="list-style-type: none"> • Electro-rheological properties <p><administratively transferred to C10N 2030/60 ADD></p>

D	C10N 2230/62	<ul style="list-style-type: none"> • Food-grade properties <administratively transferred to C10N 2030/62 ADD>
D	C10N 2230/64	<ul style="list-style-type: none"> • Environmental friendly compositions <administratively transferred to C10N 2030/64 ADD>
D	C10N 2230/66	<ul style="list-style-type: none"> • Hydrolytic stability <administratively transferred to C10N 2030/66 ADD>
D	C10N 2230/68	<ul style="list-style-type: none"> • Shear stability <administratively transferred to C10N 2030/68 ADD>
D	C10N 2230/70	<ul style="list-style-type: none"> • Soluble oils <administratively transferred to C10N 2030/70 ADD>
D	C10N 2230/72	<ul style="list-style-type: none"> • Extended drain <administratively transferred to C10N 2030/72 ADD>
D	C10N 2230/74	<ul style="list-style-type: none"> • Noack Volatility <administratively transferred to C10N 2030/74 ADD>
D	C10N 2230/76	<ul style="list-style-type: none"> • Reduction of noise, shudder or vibrations <administratively transferred to C10N 2030/76 ADD>
D	C10N 2230/78	<ul style="list-style-type: none"> • Fuel contamination <administratively transferred to C10N 2030/78 ADD>
D	C10N 2240/00	Specified uses or applications of lubricating compositions <administratively transferred to C10N 2040/00 ADD>
D	C10N 2240/02	<ul style="list-style-type: none"> • Bearings <administratively transferred to C10N 2040/02 ADD>
D	C10N 2240/04	<ul style="list-style-type: none"> • Gear oil <administratively transferred to C10N 2040/04 ADD>
D	C10N 2240/042	<ul style="list-style-type: none"> • • for automatic transmissions <administratively transferred to C10N 2040/042 ADD>
D	C10N 2240/044	<ul style="list-style-type: none"> • • for manual transmissions <administratively transferred to C10N 2040/044 ADD>
D	C10N 2240/045	<ul style="list-style-type: none"> • • for Continuous Variable Transmission [CVT] <administratively transferred to C10N 2040/045 ADD>
D	C10N 2240/046	<ul style="list-style-type: none"> • • for traction drives <administratively transferred to C10N 2040/046 ADD>
D	C10N 2240/06	<ul style="list-style-type: none"> • Precision machinery, instruments <administratively transferred to C10N 2040/06 ADD>
D	C10N 2240/08	<ul style="list-style-type: none"> • Hydraulic fluids, e.g. for brakes, clutches <administratively transferred to C10N 2040/08 ADD>
D	C10N 2240/10	<ul style="list-style-type: none"> • Internal combustion engines <administratively transferred to C10N 2040/25 ADD>
D	C10N 2240/101	<ul style="list-style-type: none"> • • Alcohol fuelled engines <administratively transferred to C10N 2040/251 ADD>
D	C10N 2240/102	<ul style="list-style-type: none"> • • Diesel engines <administratively transferred to C10N 2040/252 ADD>

- D C10N 2240/103 • • • Small diesel engines
 <administratively transferred to [C10N 2040/253](#) ADD>
- D C10N 2240/104 • • Gasoline engines
 <administratively transferred to [C10N 2040/255](#) ADD>
- D C10N 2240/105 • • • Two-cycle engines
 <administratively transferred to [C10N 2040/26](#) ADD>
- D C10N 2240/106 • • • Rotary engines
 <administratively transferred to [C10N 2040/28](#) ADD>
- D C10N 2240/108 • • for running-in; grinding
 <administratively transferred to [C10N 2040/10](#) ADD>
- D C10N 2240/12 • Gas turbines
 <administratively transferred to [C10N 2040/12](#) ADD>
- D C10N 2240/121 • • Aircraft turbines
 <administratively transferred to [C10N 2040/13](#) ADD>
- D C10N 2240/14 • Steam engines or turbines
 <administratively transferred to [C10N 2040/135](#) ADD>
- D C10N 2240/20 • Electrical or magnetic applications
 <administratively transferred to [C10N 2040/14](#) ADD>
- D C10N 2240/201 • • Dielectrics or insulators
 <administratively transferred to [C10N 2040/16](#) ADD>
- D C10N 2240/202 • • for electric contacts
 <administratively transferred to [C10N 2040/17](#) ADD>
- D C10N 2240/203 • • Pantographs, i.e. printing devices
 <administratively transferred to [C10N 2040/175](#) ADD>
- D C10N 2240/204 • • Magnetic recording mediums
 <administratively transferred to [C10N 2040/18](#) ADD>
- D C10N 2240/205 • • Magnetic fluids
 <administratively transferred to [C10N 2040/185](#) ADD>
- D C10N 2240/22 • Lubricating sealants
 <administratively transferred to [C10N 2040/34](#) ADD>
- D C10N 2240/30 • Refrigerators; Compressors
 <administratively transferred to [C10N 2040/30](#) ADD>
- D C10N 2240/40 • Metal working
 <administratively transferred to [C10N 2040/20](#) ADD>
- D C10N 2240/401 • • with removal of material, e.g. cutting, grinding, drilling
 <administratively transferred to [C10N 2040/22](#) ADD>
- D C10N 2240/402 • • without removal of material, e.g. forming, forging, drawing, pressing,
 stamping, rolling, extruding
 <administratively transferred to [C10N 2040/24](#) ADD>
- D C10N 2240/403 • • Manufacturing joint-less pipes
 <administratively transferred to [C10N 2040/241](#) ADD>
- D C10N 2240/404 • • Hot working
 <administratively transferred to [C10N 2040/242](#) ADD>

- D C10N 2240/405
 - • Gold-working
<administratively transferred to [C10N 2040/243](#) ADD>
- D C10N 2240/406
 - • of specific metals
<administratively transferred to [C10N 2040/244](#) ADD>
- D C10N 2240/407
 - • • Soft metals, e.g. aluminium
<administratively transferred to [C10N 2040/245](#) ADD>
- D C10N 2240/408
 - • • Iron or steel
<administratively transferred to [C10N 2040/246](#) ADD>
- D C10N 2240/409
 - • • stainless steel
<administratively transferred to [C10N 2040/247](#) ADD>
- D C10N 2240/50
 - Wires, ropes or cables
<administratively transferred to [C10N 2040/32](#) ADD>
- D C10N 2240/52
 - Conveyors; Chain belts
<administratively transferred to [C10N 2040/38](#) ADD>
- D C10N 2240/54
 - Generators or electric motors in oil or gas winning field
<administratively transferred to [C10N 2040/40](#) ADD>
- D C10N 2240/56
 - Flashing oils; Marking oils
<administratively transferred to [C10N 2040/42](#) ADD>
- D C10N 2240/58
 - Mould release agents
<administratively transferred to [C10N 2040/36](#) ADD>
- D C10N 2240/60
 - Supervacuum or supercritical use
<administratively transferred to [C10N 2040/44](#) ADD>
- D C10N 2240/62
 - Textile oils
<administratively transferred to [C10N 2040/46](#) ADD>
- D C10N 2240/64
 - Slushing oils
<administratively transferred to [C10N 2040/48](#) ADD>
- D C10N 2240/66
 - Medical uses
<administratively transferred to [C10N 2040/50](#) ADD>
- D **C10N 2250/00** **Form or state of lubricant compositions in which they are used**
 <administratively transferred to [C10N 2050/00](#) ADD>
- D C10N 2250/02
 - Emulsions; Colloids; Micelles
<administratively transferred to [C10N 2050/01](#) ADD>
- D C10N 2250/021
 - • Oil-in-water
<administratively transferred to [C10N 2050/011](#) ADD>
- D C10N 2250/022
 - • Water-in-oil
<administratively transferred to [C10N 2050/013](#) ADD>
- D C10N 2250/04
 - Aerosols
<administratively transferred to [C10N 2050/04](#) ADD>
- D C10N 2250/06
 - Gaseous form
<administratively transferred to [C10N 2050/06](#) ADD>
- D C10N 2250/08
 - Solids
<administratively transferred to [C10N 2050/08](#) ADD>

D	C10N 2250/10	<ul style="list-style-type: none"> • Semi-solids or greases <p><administratively transferred to C10N 2050/10 ADD></p>
D	C10N 2250/12	<ul style="list-style-type: none"> • Dispersions of solid lubricants <p><administratively transferred to C10N 2050/015 ADD></p>
D	C10N 2250/121	<ul style="list-style-type: none"> • • compositions providing a coating after evaporation of a medium, e.g. of solvent, water <p><administratively transferred to C10N 2050/02 ADD></p>
D	C10N 2250/14	<ul style="list-style-type: none"> • Multi-layer lubricant coatings <p><administratively transferred to C10N 2050/023 ADD></p>
D	C10N 2250/141	<ul style="list-style-type: none"> • • in the form of films or sheets <p><administratively transferred to C10N 2050/025 ADD></p>
D	C10N 2250/16	<ul style="list-style-type: none"> • Microcapsules <p><administratively transferred to C10N 2050/12 ADD></p>
D	C10N 2250/18	<ul style="list-style-type: none"> • Composite materials, or sliding materials in which lubricants are integrally moulded <p><administratively transferred to C10N 2050/14 ADD></p>
D	C10N 2260/00	<p>Chemical after-treatment or modifications of compounds</p> <p><administratively transferred to C10N 2060/00 ADD></p>
D	C10N 2260/02	<ul style="list-style-type: none"> • Reduction <p><administratively transferred to C10N 2060/02 ADD></p>
D	C10N 2260/04	<ul style="list-style-type: none"> • Oxidation <p><administratively transferred to C10N 2060/04 ADD></p>
D	C10N 2260/06	<ul style="list-style-type: none"> • Treatment with epoxides or oxyalkylation reactions <p><administratively transferred to C10N 2060/06 ADD></p>
D	C10N 2260/08	<ul style="list-style-type: none"> • Halogenation <p><administratively transferred to C10N 2060/08 ADD></p>
D	C10N 2260/09	<ul style="list-style-type: none"> • Treatment with nitrogen-containing compounds <p><administratively transferred to C10N 2060/09 ADD></p>
D	C10N 2260/10	<ul style="list-style-type: none"> • Treatment with sulfur or sulfur-containing compounds <p><administratively transferred to C10N 2060/10 ADD></p>
D	C10N 2260/12	<ul style="list-style-type: none"> • Treatment with phosphorus or phosphorus-containing compounds <p><administratively transferred to C10N 2060/12 ADD></p>
D	C10N 2260/14	<ul style="list-style-type: none"> • Treatment with boron or boron-containing compounds <p><administratively transferred to C10N 2060/14 ADD></p>
D	C10N 2270/00	<p>Specific manufacturing methods for lubricant compositions or compounds not covered by groups C10N 2210/00 - C10N 2260/00</p> <p><administratively transferred to C10N 2070/00 ADD></p>
D	C10N 2270/02	<ul style="list-style-type: none"> • concentrating of additives <p><administratively transferred to C10N 2070/02 ADD></p>
D	C10N 2280/00	<p>Specific pretreatment of the surface to be lubricated, e.g. phosphatising</p> <p><administratively transferred to C10N 2080/00 ADD></p>

Project: MP0439 (C11C)**M C11C****FATTY ACIDS FROM FATS, OILS OR WAXES; CANDLES; FATS, OILS OR FATTY ACIDS BY CHEMICAL MODIFICATION OF FATS, OILS, OR FATTY ACIDS OBTAINED THEREFROM****WARNING***In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.***Project: MP0141 (C11D)****U C11D 1/00****Detergent compositions based essentially on surface-active compounds; Use of these compounds as a detergent****NOTE**In groups [C11D 1/02](#) - [C11D 1/94](#), in the absence of an indication to the contrary, a compound is classified in the last appropriate place.**U C11D 1/38**

- Cationic compounds {([C11D 1/002](#), [C11D 1/004](#), [C11D 1/008](#) take precedence)}

M C11D 1/52

- Carboxylic amides, alkylolamides or imides {or their condensation products with alkylene oxides}

WARNING~~Until September 2008, when classification was made, group C11D 3/07 took precedence over group C11D 1/52~~**U C11D 1/65**

- Mixtures of anionic with cationic compounds

M C11D 1/655

- Mixtures of sulfonated products with alkylolamides of carboxylic acids

WARNING~~Until September 2008, when classification was made, group C11D 3/066 took precedence over group C11D 1/655~~**U C11D 1/66**

- Non-ionic compounds {([C11D 1/002](#), [C11D 1/004](#), [C11D 1/008](#) take precedence)}

M C11D 1/72

- Ethers of polyoxyalkylene glycols

WARNING~~Until September 2008, when classification was made, group C11D 3/075 took precedence over group C11D 1/72~~**U C11D 17/00****Detergent materials characterised by their shape or physical properties {(soaps [C11D 9/00](#), shaping soap [C11D 13/00](#))}****M C11D 17/0008**

- {aqueous liquid non soap compositions ([C11D 3/0015](#), [C11D 3/3947](#), [C11D 3/3956](#) take precedence)}

WARNING~~This subgroup is not longer used for the classification of new documents from 01 November 2011~~

Project: MP0439 (C12C)**M C12C**

BEER; PREPARATION OF BEER BY FERMENTATION (ageing or ripening by storing [C12H 1/22](#); methods for reducing the alcohol content after fermentation [C12H 3/00](#); methods for increasing the alcohol content after fermentation [C12H 6/00](#); venting devices for casks, barrels or the like [C12L 9/00](#)); **PREPARATION OF MALT FOR MAKING BEER; PREPARATION OF HOPS FOR MAKING BEER**

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0443 (C12N)**U C12N 5/00**

Undifferentiated human, animal or plant cells, e.g. cell lines; Tissues; Cultivation or maintenance thereof; Culture media therefor; (plant reproduction by tissue culture techniques [A01H 4/00](#))

NOTE

In this group, the following words are used with the meanings indicated:

- a "totipotent" cell can differentiate into all somatic lineages (ectoderm, mesoderm, endoderm), the germ line and extra-embryonic tissues such as the placenta;
- a "pluripotent" cell is a somatic stem cell which can differentiate into cells of at least two of the three somatic lineages (ectoderm, mesoderm, endoderm);
- a "multipotent" cell is restricted to one lineage;
- "progenitor" and "precursor" cells are further restricted within the lineage. If not explicitly foreseen, totipotent cells are classified with pluripotent cells. Multipotent cells should not be classified with pluripotent cells. Unless provided for otherwise, committed progenitors are classified with their progeny.

M C12N 5/06

- {Animal cells or tissues; Human cells or tissues (preservation of living cells or tissues [A01N 1/02](#))}; ~~Not used, see subgroups~~

NOTE

In this group, the following words are used with the meanings indicated:

- a "totipotent" cell can differentiate into all somatic lineages (ectoderm, mesoderm, endoderm), the germ line and extra-embryonic tissues such as the placenta;
- a "pluripotent" cell is a somatic stem cell which can differentiate into cells of at least two of the three somatic lineages (ectoderm, mesoderm, endoderm);
- a "multipotent" cell is restricted to one lineage.

"Progenitor" and "precursor" cells are further restricted within the lineage. If not explicitly foreseen, totipotent cells are classified with pluripotent cells. Multipotent cells should not be classified with pluripotent cells

U C12N 5/0602

- {Vertebrate cells}

NOTE

Three-dimensional culture, tissue culture or organ culture are classified with the corresponding cells, if not specially provided for

M C12N 5/0608

- • {Germ cells (production of embryos, nuclear transfer [A01K 67/027](#))}; ~~Not used, see subgroups~~

M C12N 5/0681

- • {Cells of the genital tract; Non-germinal cells from gonads}; ~~Not used, see subgroups~~

- M C12N 5/10 · Cells modified by introduction of foreign genetic material ~~(Not used, see subgroups)~~
- U C12N 15/00 **Mutation or genetic engineering; DNA or RNA concerning genetic engineering, vectors, e.g. plasmids, or their isolation, preparation or purification; Use of hosts therefor (mutants or genetically engineered microorganisms, per se [C12N 1/00](#), [C12N 5/00](#), [C12N 7/00](#); new plants per se [A01H](#); plant reproduction by tissue culture techniques [A01H 4/00](#); new animals per se [A01K 67/00](#); use of medicinal preparations containing genetic material which is inserted into cells of the living body to treat genetic diseases, gene therapy [A61K 48/00](#))**
- U C12N 15/09 · Recombinant DNA-technology
- U C12N 15/63 · · Introduction of foreign genetic material using vectors; Vectors; Use of hosts therefor; Regulation of expression
- U C12N 15/79 · · · Vectors or expression systems specially adapted for eukaryotic hosts
- NOTE
This group covers the use of eukaryotes as hosts.
- U C12N 15/82 · · · · for plant cells {, e.g. plant artificial chromosomes (PACs)}
- WARNING
Documents are being continuously reclassified into this new classification scheme. See Warning notes below
- U C12N 15/8241 · · · · · {Phenotypically and genetically modified plants via recombinant DNA technology}
- U C12N 15/8261 · · · · · · {with agronomic (input) traits, e.g. crop yield}
- M C12N 15/8262 · · · · · · · {involving plant development ~~(not used)~~}

Project: MP0439 (C12Q)

- M C12Q **MEASURING OR TESTING PROCESSES INVOLVING ENZYMES, NUCLEIC ACIDS OR MICROORGANISMS (immunoassay [G01N 33/53](#)); COMPOSITIONS OR TEST PAPERS THEREFOR; PROCESSES OF PREPARING SUCH COMPOSITIONS; CONDITION-RESPONSIVE CONTROL IN MICROBIOLOGICAL OR ENZYMOLOGICAL PROCESSES**

NOTES

1. This subclass does not cover the observation of the progress or of the result of processes specified in this subclass by any of the methods specified in groups [G01N 3/00](#) - [G01N 29/00](#), which is covered by subclass [G01N](#).
2. In this subclass, the following expression is used with the meaning indicated: "involving", when used in relation to a substance, includes the testing for the substance as well as employing the substance as a determinant or reactant in a test for a different substance.
3. Attention is drawn to Notes (1) to (3) following the title of class [C12](#).
4. In this subclass, test media are classified in the appropriate group for the relevant test process.
5. Documents describing the use of an electrode for analysis of a specific analyte are classified in [C12Q 1/001](#) or subgroups and not according to the last place rule
6. Documents relating to new peptides, e.g. enzymes, or new DNA or its corresponding mRNA, encoding for the peptides, and their use in measuring or testing processes are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their use in diagnostics. However where the new nucleic acids are principally used in

diagnostic processes, e.g. PCR, hybridisation reactions, the documents are also classified in group [C12Q 1/68](#)

7. When classifying in groups [C12Q 1/68](#) - [C12Q 1/70](#) it is desirable to classify with symbols from groups [C12Q 2500/00](#) - [C12Q 2565/634](#), relating to relevant technical features of the invention, using Combination Sets.

8. In groups [C12Q 1/6876](#) - [C12Q 1/6895](#) and [C12Q 1/70](#) - [C12Q 1/708](#) it is desirable to add the indexing codes [C12Q 2600/00](#) - [C12Q 2600/178](#) which reflect the use of the product in combination with the virus groups only if the application refers to products.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (C21C)

M C21C

PROCESSING OF PIG-IRON, e.g. REFINING, MANUFACTURE OF WROUGHT-IRON OR STEEL; TREATMENT IN MOLTEN STATE OF FERROUS ALLOYS (refining metals in general [C22B 9/00](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (C21D)

M C21D

MODIFYING THE PHYSICAL STRUCTURE OF FERROUS METALS; GENERAL DEVICES FOR HEAT TREATMENT OF FERROUS OR NON-FERROUS METALS OR ALLOYS; MAKING METAL MALLEABLE BY DECARBURISATION, TEMPERING OR OTHER TREATMENTS (cementation by diffusion processes [C23C](#); surface treatment of metallic material involving at least one process provided for in class [C23](#) and at least one process covered by this subclass, [C23F 17/00](#); unidirectional solidification of eutectic materials or unidirectional demixing of eutectoid materials [C30B](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0141 (C22C)

U C22C 45/00

Amorphous alloys

U C22C 45/10

• with molybdenum, tungsten, niobium, tantalum, titanium, or zirconium {or Hf} as the major constituent

Project: N/A (C22C)

**C22C 47/00 -
C22C 49/00**

Alloys containing fibres or filaments

WARNING

The subgroups of C22C 47/00 and C22C 49/00 might be incomplete as some of the patent documents classified C22C 47/08, C22C 47/16 and C22C 49/00 might need reclassification to one or more subgroups or to C22C 47/02 and subgroups

Project: MP0141 (C22C)

U C22C 47/00

Making alloys containing metallic or non-metallic fibres or filaments

U C22C 47/02

• Pretreatment of the fibres or filaments

- M C22C 47/025 • • {Aligning or orienting the fibres}
- WARNING**
Not complete, see also C22C 47/02
- U C22C 47/06 • • by forming the fibres or filaments into a preformed structure, e.g. using a temporary binder to form a mat-like element
- M C22C 47/062 • • • {from wires or filaments only}
- WARNING**
Groups C22C 47/062, C22C 47/064, C22C 47/066 and C22C 47/068 are not complete, see also C22C 47/02 or C22C 47/06

Project: MP0141 (C23C)

- U C23C 18/00 **Chemical coating by decomposition of either liquid compounds or solutions of the coating forming compounds, without leaving reaction products of surface material in the coating; Contact plating**
- NOTE**
This groups covers also suspensions containing reactive liquids and non-reactive solid particles.
- U C23C 18/02 • • by thermal decomposition
- M C23C 18/12 • • characterised by the deposition of inorganic material other than metallic material
- WARNING**
Groups C23C 18/1204 - C23C 18/1295 are not complete pending a reorganisation. See also this group
- U C23C 18/16 • • by reduction or substitution, e.g. electroless plating ([C23C 18/54](#) takes precedence)
- U C23C 18/1601 • • {Process or apparatus}
- U C23C 18/1603 • • • {coating on selected surface areas}
- M C23C 18/1605 • • • • {by masking}
- WARNING**
the groups C23C 18/1605 - C23C 18/1616 are not complete, pending reorganisation. See also C23C 18/1603
- M C23C 18/1619 • • • {Apparatus for electroless plating}
- WARNING**
the groups C23C 18/1619 - C23C 18/1698 are not complete, pending reorganisation. See also C23C 18/1601
- U C23C 18/18 • • Pretreatment of the material to be coated
- M C23C 18/1803 • • • {of metallic material surfaces or of a non-specific material surfaces}
- WARNING**
the groups C23C 18/1803 - C23C 18/1848 are not complete, pending reorganisation. See also C23C 18/18
- U C23C 18/1851 • • • {of surfaces of non-metallic or semiconducting in organic material}

- U C23C 18/1855 • • • {by mechanical pretreatment, e.g. grinding, sanding}
- WARNING
the groups [C23C 18/1855](#) - [C23C 18/1896](#) are not complete, pending reorganisation. See also [C23C 18/18](#)

- U C23C 18/20 • • • of organic surfaces, e.g. resins
- U C23C 18/2006 • • • {by other methods than those of [C23C 18/22](#) - [C23C 18/30](#)}
- U C23C 18/2013 • • • • {by mechanical pretreatment, e.g. grinding, sanding}
- WARNING
the groups [C23C 18/2013](#) - [C23C 18/2093](#) are not complete, pending reorganisation. See also [C23C 18/2006](#)

Project: MP0443 (C23C)

- M C23C 18/28 • • • Sensitising or activating-~~{(not used, see subgroups)}~~

Project: MP0439 (C25C)

- M C25C **PROCESSES FOR THE ELECTROLYTIC PRODUCTION, RECOVERY OR REFINING OF METALS; APPARATUS THEREFOR**

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0141 (C25D)

- U C25D 3/00 **Electroplating: Baths therefor**

- U C25D 3/66 • from melts
- M C25D 3/665 • {from ionic liquids}

WARNING

~~Group C25D 3/665 is not complete, pending reorganization, see also C25D 3/66~~

- U C25D 5/00 **Electroplating characterised by the process; Pretreatment or after-treatment of workpieces**

- M C25D 5/003 • {Electroplating characterised by the use of gases, e.g. pressure influence (removal or gases or vapours, [C25D 21/04](#))}

WARNING

~~Groups C25D 5/003, C25D 5/006 are not complete, pending reorganization, see also C25D 5/00~~

- U C25D 7/00 **Electroplating characterised by the article coated**

- M C25D 7/001 • {Magnets}

WARNING

~~Groups C25D 7/001-C25D 7/008 are not complete, pending reorganization, see also C25D 7/00~~

- U C25D 7/12 • Semiconductors

- M C25D 7/123 • • {coated first with a seed layer, e.g. for filling vias}
- WARNING**
Groups C25D 7/123-C25D 7/126 are not complete, pending reorganization, see also C25D 7/12
- U C25D 11/00** **Electrolytic coating by surface reaction, i.e. forming conversion layers**
- M C25D 11/005 • {Apparatus specially adapted for electrolytic conversion coating (apparatus in general for electrolytic coating [C25D 17/00](#))}
- WARNING**
Groups C25D 11/005, C25D 11/022-C25D 11/028, C25D 11/045 are not complete, pending reorganization, see also C25D 11/00
- U C25D 17/00** **Constructional parts, or assemblies thereof, of cells for electrolytic coating (apparatus for continuously conveying articles into baths [B65G](#), e.g. [B65G 49/00](#); electric devices see the relevant classes, e.g. [H01B](#), [H02G](#))**
{{[C25D 7/06](#), [C25D 11/005](#), [C25D 13/22](#), [C25](#) takes precedence}}
- M C25D 17/001 • {Apparatus specially adapted for plating wafers, e.g. semiconductors, solar cells}
- WARNING**
Groups C25D 17/005-C25D 17/008 are not complete, pending reorganization, see also C25D 17/00

Project: MP0141 (C30B)

- U C30B 7/00** **Single-crystal growth from solutions using solvents which are liquid at normal temperature, e.g. aqueous solutions (from molten solvents [C30B 9/00](#); by normal or gradient freezing [C30B 11/00](#); under a protective fluid [C30B 27/00](#))**
- M C30B 7/005 • {Epitaxial layer growth}
- WARNING**
Group C30B 7/005 is not complete, see also C30B 7/00
- M C30B 23/00** **Single-crystal growth by condensing evaporated or sublimed materials**
NOTE
Groups [C30B 23/002](#) - [C30B 23/005](#) take precedence over groups [C30B 23/007](#) - [C30B 23/08](#)
- WARNING**
Group C30B 23/002 - C30B 23/005 are not complete, see also C30B 23/02
- U C30B 23/02 • Epitaxial-layer growth
- U C30B 23/06 • • Heating of the deposition chamber, the substrate or the materials to be evaporated
- M C30B 23/063 • • • {Heating of the substrate}
- WARNING**
Group C30B 23/063 is not complete, see also C30B 23/06
- M C30B 23/066 • • • {Heating of the material to be evaporated}
- WARNING**
Group C30B 23/066 is not complete, see also C30B 23/06

U	C30B 25/00	Single-crystal growth by chemical reaction of reactive gases, e.g. chemical vapour-deposition growth
U	C30B 25/02	• Epitaxial-layer growth
U	C30B 25/16	• • Controlling or regulating (controlling or regulating in general G05)
M	C30B 25/165	• • • {the flow of the reactive gases}
		WARNING Not complete pending reclassification; see also group C30B 25/14
U	C30B 25/18	• • characterised by the substrate
M	C30B 25/183	• • • {being provided with a buffer layer, e.g. a lattice matching layer}
		WARNING This group is not complete pending reclassification; see also C30B 25/18 and subgroups
U	C30B 29/00	Single crystals or homogeneous polycrystalline material with defined structure characterised by the material or by their shape (alloys C22C)
		NOTE In groups C30B 29/02 - C30B 29/58 , in the absence of an indication to the contrary, a material is classified in the last appropriate place.
U	C30B 29/60	• characterised by shape
M	C30B 29/64	• • Flat crystals, e.g. plates, strips or discs
		WARNING This group is not complete pending reclassification; see also C30B 29/60 and subgroups
M	C30B 29/66	• • Crystals of complex geometrical shape, e.g. tubes, cylinders
		WARNING This group is not complete pending reclassification; see also C30B 29/60 and subgroups
U	C30B 35/00	Apparatus in general, specially adapted for the growth, production or after-treatment of single crystals or a homogeneous polycrystalline material with defined structure
M	C30B 35/007	• {Apparatus for preparing, pre-treating the source material to be used for crystal growth}
		WARNING This group is not complete pending reclassification; see also groups pertaining to the different crystal growth methods; particularly the main groups of subclass C30B

Project: RP0264 (D04H)

M D04H

MAKING TEXTILE FABRICS, e.g. FROM FIBRES OR FILAMENTARY MATERIAL (weaving [D03](#); knitting [D04B](#); ~~braiding {or lace-making} D04C~~; ~~net-making {or making knotted carpets} D04G~~; ~~braiding D04C~~; ~~net-making D04G~~; sewing [D05B](#); tufting [D05C](#), {e.g. [D05C 15/04](#)}; finishing non-woven fabrics [D06](#)); FABRICS MADE BY SUCH PROCESSES OR APPARATUS, e.g. FELTS, NON-WOVEN FABRICS; COTTON-WOOL; ~~WADDING {~~; ~~WADDING {~~ NON-WOVEN FABRICS FROM STAPLE FIBRES, FILAMENTS OR YARNS, BONDED WITH AT LEAST ONE WEB-LIKE MATERIAL DURING THEIR CONSOLIDATION}{non-woven fabrics having an intermediate or external layer of a different kind, e.g. of woven fabric, [B32B](#); {~~manufacturing hats A42C~~; ~~filtering material B01D 39/00~~; ~~making board or the like from wood fibre B27N~~; ~~producing shaped articles from mixtures containing fibres B28B 1/52~~; ~~making layered products from solid layers, at least one of which contains synthetic resin as an essential component B32B 27/00~~; ~~making or treating glass wool and mineral wool C03B 37/00~~; ~~compounding ingredients used as fillers for mortars and the like C04B 14/38, C04B 16/06, C04B 20/0048~~; ~~sintering plastics particles C08J 9/24~~; ~~manufacturing by extrusion of synthetic filaments and fibres in general D01D~~; ~~paper D21C - D21H~~; ~~making shaped articles from liquid suspensions of cellulose fibres D21J~~)}

NOTES

1. In this subclass, the following ~~expression is~~ *terms or expressions are* used with the meaning indicated:-

- "non-woven fabrics" means fabrics formed wholly or partly of textile material by processes comprising operations other than the weaving, knitting, braiding, lacing, or knotting of yarns, threads, or filaments for which provision is made in other subclasses of ~~Section~~ *section D*. This expression includes felts, cotton-wool, ~~and wadding~~; *and wadding*;
- *"fibre" means a relatively-short, elongated member of natural or man-made material;*
- *"filament" means an endless or quasi-endless, elongated member of natural or man-made material;*
- *"yarn" means a unitary assembly of fibres, usually produced by spinning;*
- *"thread" means an assembly of yarns or filaments, usually produced by twisting;*
- *"synthetic" fibres or filaments means fibres or filaments or the like manufactured from synthesising polymers or small molecules. Examples are polyamide, acrylic, polyester or carbon fibres;*
- *"artificial" fibres or filaments means fibres or filaments or the like manufactured by man from natural polymers or their derivatives. Examples are regenerated cellulosic fibres or semi-synthetic fibres;*
- *"man-made" fibres or filaments means fibres or filaments which are manufactured by man including "synthetic" or "artificial" fibres.*

2. In this subclass:-

- some of the non-woven fabrics can also be regarded as "layered products" within the meaning of subclass [B32B](#), and further classification in that subclass should be considered in accordance with the notes thereto;
- in cases where the making of non-woven fabrics involves the use of particular chemical compounds or compositions, e.g. for treating

or bonding fibres, filaments, or yarns, further classification in other appropriate subclasses should also be considered.

3. By varying the proportions of fibres or threads, and the chemical compounds or compositions, the final products may be given the appearance of paper, cardboard, leather or the like.

~~4. In this subclass, a number of groups, e.g. D04H 1/067, correspond to IPC2012:01~~

WARNING

~~1. Documents of the complete subclass D04H including all subgroups are in the process of being reorganised to the new groups corresponding to the IPC 2012:01 classification scheme defined below.~~

~~2.~~ 1. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

U D04H 1/00

Non-woven fabrics formed wholly or mainly of staple fibres or like relatively short fibres

U D04H 1/04

- from fleeces or layers composed of fibres having existing or potential cohesive properties, e.g. natural fibres, prestretched or fibrillated artificial fibres (felting apparatus [D04H 17/00](#))

U D04H 1/08

- • and hardened by felting; Felts or felted products

M D04H 1/22

- • • Three-dimensional articles formed by felting processes ~~{{(formed by other consolidation processes D04H 1/005)}}~~

U D04H 1/40

- from fleeces or layers composed of fibres without existing or potential cohesive properties

WARNING

Groups [D04H 1/407](#) and [D04H 1/413](#) are not complete pending a reorganisation. See also group [D04H 1/40](#)

Group [D04H 1/407](#) is not complete pending a reorganisation. See also group [D04H 1/40](#)

U D04H 1/42

- • characterised by the use of certain kinds of fibres insofar as this use has no preponderant influence on the consolidation of the fleece

WARNING

Groups [D04H 1/4209](#) - [D04H 1/52](#) are not complete pending a reorganisation. See also group [D04H 1/4209](#) and other subgroups of [D04H 1/42](#)

U D04H 1/4374

- • • using different kinds of webs, e.g. by layering webs

C D04H 1/4382

- • • Stretched reticular film fibres; Composite fibres; Mixed fibres; Ultrafine fibres; Fibres for artificial leather

WARNING

Group [D04H 1/4382](#) is impacted by reclassification into groups [D04H 1/43825](#) – [D04H 1/43838](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N D04H 1/43825

- • • • {Composite fibres}

WARNING

Groups [D04H 1/43825](#) – [D04H 1/43832](#) are incomplete pending reclassification of documents from group [D04H 1/4382](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N D04H 1/43828

- • • • • {sheath-core}

- N D04H 1/4383 {sea-island}
- N D04H 1/43832 {side-by-side}
- N D04H 1/43835 {Mixed fibres, e.g. at least two chemically different fibres or fibre blends}
- WARNING
Group [D04H 1/43835](#) is incomplete pending reclassification of documents from Group [D04H 1/4382](#).
Groups [D04H 1/4382](#) and [D04H 1/43835](#) should be considered in order to perform a complete search.
- N D04H 1/43838 {Ultrafine fibres, e.g. microfibres}
- WARNING
Group [D04H 1/43838](#) is incomplete pending reclassification of documents from Group [D04H 1/4382](#).
Groups [D04H 1/4382](#) and [D04H 1/43838](#) should be considered in order to perform a complete search.
- C D04H 1/4391 . . . characterised by the shape of the fibres
- WARNING
Group [D04H 1/4391](#) is impacted by reclassification into groups [D04H 1/43912](#) – [D04H 1/43918](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N D04H 1/43912 {fibres with noncircular cross-sections}
- WARNING
Group [D04H 1/43912](#) is incomplete pending reclassification of documents from group [D04H 1/4391](#).
Groups [D04H 1/4391](#) and [D04H 1/43912](#) should be considered in order to perform a complete search.
- N D04H 1/43914 {hollow fibres}
- WARNING
Group [D04H 1/43914](#) is incomplete pending reclassification of documents from group [D04H 1/4391](#).
Groups [D04H 1/4391](#) and [D04H 1/43914](#) should be considered in order to perform a complete search.
- N D04H 1/43916 {microcellular fibres, e.g. porous or foamed fibres}
- WARNING
Group [D04H 1/43916](#) is incomplete pending reclassification of documents from group [D04H 1/4391](#).
Groups [D04H 1/4391](#) and [D04H 1/43916](#) should be considered in order to perform a complete search.
- N D04H 1/43918 {nonlinear fibres, e.g. crimped or coiled fibres}
- WARNING
Group [D04H 1/43918](#) is incomplete pending reclassification of documents from group [D04H 1/4391](#).
Groups [D04H 1/4391](#) and [D04H 1/43918](#) should be considered in order to perform a complete search.

- M D04H 1/54
- • by welding together the fibres, e.g. by partially melting or dissolving (in combination with needling [D04H 1/485](#))
- WARNING**
Groups [D04H 1/54](#) – [D04H 1/565](#) are not complete pending a reorganisation. See also group [D04H 1/541](#) and other subgroups of [D04H 1/54](#)
- U D04H 1/5405
- • • {at spaced points or locations}
- WARNING**
This group is no longer used for the classification of new documents as from April 1, 2011. The backlog of this group is being continuously reclassified to [D04H 1/42](#) and sub-groups, [D04H 1/54](#) and sub-groups
- C D04H 1/541
- • • Composite fibres, e.g. sheath-core, sea-island or side-by-side; Mixed fibres
- WARNING**
Group [D04H 1/541](#) is impacted by reclassification into groups [D04H 1/5412](#) – [D04H 1/5418](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N D04H 1/5412
- • • • {sheath-core}
- WARNING**
Group [D04H 1/5412](#) is incomplete pending reclassification of documents from group [D04H 1/541](#). Groups [D04H 1/541](#) and [D04H 1/5412](#) should be considered in order to perform a complete search.
- N D04H 1/5414
- • • • {side-by-side}
- WARNING**
Group [D04H 1/5414](#) is incomplete pending reclassification of documents from group [D04H 1/541](#). Groups [D04H 1/541](#) and [D04H 1/5414](#) should be considered in order to perform a complete search.
- N D04H 1/5416
- • • • {sea-island}
- WARNING**
Group [D04H 1/5416](#) is incomplete pending reclassification of documents from group [D04H 1/541](#). Groups [D04H 1/541](#) and [D04H 1/5416](#) should be considered in order to perform a complete search.
- N D04H 1/5418
- • • • {Mixed fibres, e.g. at least two chemically different fibres or fibre blends}
- WARNING**
Group [D04H 1/5418](#) is incomplete pending reclassification of documents from group [D04H 1/541](#). Groups [D04H 1/541](#) and [D04H 1/5418](#) should be considered in order to perform a complete search.

Project: MP0439 (D06J)

- M D06J** **PLEATING, KILTING OR GOFFERING TEXTILE FABRICS OR WEARING APPAREL** ({corrugating, creasing, or otherwise deforming paper, or material worked in a manner analogous to paper, without removing material [B31F](#);} by sewing [D05B](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0399-F (D06L)

- U D06L 4/00** **Bleaching fibres, filaments, threads, yarns, fabrics, feathers or made-up fibrous goods; Bleaching leather or furs**

- M D06L 4/20** • using agents which contain halogen

WARNING

Group D06L 4/20 is impacted by reclassification into group D06L 4/22.
Groups D06L 4/20 and D06L 4/22 should be considered in order to perform a complete search.

- M D06L 4/21** • • combined with specific additives ([D06L 4/24](#) takes precedence)

WARNING

Group D06L 4/21 is impacted by reclassification into groups D06L 4/24 and D06L 4/26.
Groups D06L 4/21, D06L 4/24, and D06L 4/26 should be considered in order to perform a complete search.

- M D06L 4/22** • • using inorganic agents

WARNING

Group D06L 4/22 is incomplete pending reclassification of documents from group D06L 4/20.
Groups D06L 4/20 and D06L 4/22 should be considered in order to perform a complete search.

- M D06L 4/24** • • using chlorites or chlorine dioxide

WARNING

Groups D06L 4/24 and D06L 4/26 are incomplete pending reclassification of documents from groups D06L 4/21 and D06L 4/28.
Groups D06L 4/21, D06L 4/24, D06L 4/26, and D06L 4/28 should be considered in order to perform a complete search.

- M D06L 4/28** • • in an inert solvent ([D06L 4/24](#) takes precedence)

WARNING

Group D06L 4/28 is impacted by reclassification into groups D06L 4/24 and D06L 4/26.
Groups D06L 4/28, D06L 4/24, and D06L 4/26 should be considered in order to perform a complete search.

Project: MP0439 (D06N)

M D06N WALL, FLOOR, OR LIKE COVERING MATERIALS, e.g. LINOLEUM, OILCLOTH, ARTIFICIAL LEATHER, ROOFING FELT, CONSISTING OF A FIBROUS WEB COATED WITH A LAYER OF MACROMOLECULAR MATERIAL; FLEXIBLE SHEET MATERIAL NOT OTHERWISE PROVIDED FOR

NOTE

Layered products classified in this subclass are also classified in subclass [B32B](#).

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[D06N 7/02](#) covered by [D06N 7/0002](#) – [D06N 7/0097](#)

[D06N 7/04](#) covered by [D06N 7/0002](#) – [D06N 7/0097](#)

[D06N 7/06](#) covered by [D06N 7/0002](#) – [D06N 7/0097](#)

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

Project: MP0301 (D06N)

U D06N 7/00 Flexible sheet materials not otherwise provided for, e.g. textile threads, filaments, yarns or tow, glued on macromolecular material (paper-based or board-based structures for surface covering [D21H 27/20](#))

M D06N 7/0002 • {Wallpaper or wall covering on textile basis}

WARNING

groups [D06N 7/0002](#), [D06N 7/0092](#)-[D06N 7/0097](#) are not complete, pending reorganisation. See also [D06N 7/00](#)

M D06N 7/0063 • {Floor covering on textile basis comprising a fibrous top layer being coated at the back with at least one polymer layer, e.g. carpets, rugs, synthetic turf}

WARNING

Groups [D06N 7/0063](#)-[D06N 7/0084](#) are not complete, pending reorganisation. See also [D06N 7/0036](#)

M D06N 7/0065 • • {characterised by the pile}

WARNING

Groups [D06N 7/0065](#), [D06N 7/0068](#) are not complete, pending reorganisation. See also [D06N 7/006](#)

Project: RP0481 (E04B)

U E04B 1/00 Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs (scaffolds, shutterings [E04G](#); structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, [E04H](#); the particular parts of buildings, see the relevant groups for those parts)

U E04B 1/62 • Insulation or other protection; Elements or use of specified material therefor (chemical compositions [C01](#) - [C11](#); implements for applying insulation or sealings [E04F 21/00](#); buildings to withstand or to provide protection against external undesired influences [E04H 9/00](#); sealing pipes in walls or partitions [F16L 5/02](#); shielding against dangerous radiation [G21F](#); constructions of particular parts of buildings, see the relevant groups for those parts)

- U E04B 1/92
 - • Protection against other undesired influences or dangers (buildings providing protection against external dangers [E04H 9/00](#); shielding against dangerous radiation [G21F](#))
- U E04B 1/98
 - • against vibrations or shocks (on foundations [E02D 31/08](#)); against mechanical destruction, e.g. by air-raids (against incendiary damage only [E04B 1/94](#); finishing work therefor [E04F](#); buildings withstanding earthquake or the like, shelters, arrangements of splintercatching walls [E04H 9/00](#))
- D E04B 1/985
 - • • {involving active or passive dynamic mass damping systems}
 - <administratively transferred to [E04H 9/0215](#)>

Project: RP0481 (E04H)

- U E04H 9/00

Buildings, or groups of buildings, or shelters adapted to withstand or provide protection against abnormal external influences, e.g. war-like action, earthquake, extreme climate (floatable buildings [B63B](#); foundation aspects [E02D](#); building constructions in general [E04B](#); bearings or like supports allowing movement [E04B 1/36](#); special details in regard to insulation or other protection [E04B 1/62](#); supporting structures for endangered or damaged existing buildings or parts thereof [E04G 23/04](#); doors, windows [E06B 5/00](#); air-conditioning, ventilation [F24F](#); camouflage [F41H 3/00](#); cells or rooms shielded against dangerous radiation [G21F 7/00](#))
- C E04H 9/02
 - withstanding earthquake or sinking of ground (foundations [E02D 27/34](#) ~~;~~ ~~making use of active or passive dynamic mass damping systems E04B 1/985~~)

WARNING
 Group [E04H 9/02](#) is impacted by reclassification into groups [E04H 9/0235](#) and [E04H 9/0237](#).
 Groups [E04H 9/02](#), [E04H 9/0235](#) and [E04H 9/0237](#) should be considered in order to perform a complete search.
- C E04H 9/021
 - • {Bearing, supporting or connecting constructions specially adapted for such buildings}

WARNING
 Group [E04H 9/021](#) is impacted by reclassification into groups [E04H 9/0215](#), [E04H 9/0235](#) and [E04H 9/0237](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N E04H 9/0215
 - • • {involving active or passive dynamic mass damping systems}

WARNING
 Group [E04H 9/0215](#) is incomplete pending reclassification of documents from groups [E04H 9/021](#) and [E04H 9/04](#).
 Groups [E04H 9/04](#), [E04H 9/021](#) and [E04H 9/0215](#) should be considered in order to perform a complete search.
- C E04H 9/022
 - • • {and comprising laminated structures of alternating elastomeric and rigid layers}

WARNING
 Group [E04H 9/022](#) is impacted by reclassification into groups [E04H 9/0235](#) and [E04H 9/0237](#).
 Groups [E04H 9/022](#), [E04H 9/0235](#) and [E04H 9/0237](#) should be considered in order to perform a complete search.

- C E04H 9/023
- • • {and comprising rolling elements, e.g. balls, pins}
- WARNING**
 Group [E04H 9/023](#) is impacted by reclassification into groups [E04H 9/0235](#) and [E04H 9/0237](#).
 Groups [E04H 9/023](#), [E04H 9/0235](#) and [E04H 9/0237](#) should be considered in order to perform a complete search.
- N E04H 9/0235
- • • {Anti-seismic devices with hydraulic or pneumatic damping}
- WARNING**
 Group [E04H 9/0235](#) is incomplete pending reclassification of documents from groups [E04H 9/02](#), [E04H 9/021](#), [E04H 9/022](#) and [E04H 9/023](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N E04H 9/0237
- • • {Structural braces with damping devices}
- WARNING**
 Group [E04H 9/0237](#) is incomplete pending reclassification of documents from groups [E04H 9/02](#), [E04H 9/021](#), [E04H 9/022](#) and [E04H 9/023](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- D E04H 2009/026
- • {Anti-seismic devices with hydraulic or pneumatic damping}
- <administratively transferred to [E04H 9/0235](#) INV>
- C E04H 9/04
- against air-raid or other warlike actions (respiratory apparatus [A62B](#))
- WARNING**
 Group [E04H 9/04](#) is impacted by reclassification into group [E04H 9/0215](#).
 Groups [E04H 9/04](#) and [E04H 9/0215](#) should be considered in order to perform a complete search.

Project: MP0439 (E05B)

M E05B

LOCKS; ACCESSORIES THEREFOR; HANDCUFFS

NOTES

1. Operating or controlling of locks for vehicle wings are classified in groups [E05B 77/00-E05B 81/00](#).
2. Knobs, handles or press buttons for locks of vehicle wings are classified in [E05B 79/00-E05B 85/00](#).
3. {In this subclass, it is desirable to add the indexing code(s) of [E05Y](#).}

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

E05B 1/02	covered by	E05B 1/00
E05B 5/02	covered by	E05B 5/003
E05B 5/04	covered by	E05B 5/003
E05B 9/06	covered by	E05B 9/00 - E05B 9/048
E05B 13/02	covered by	E05B 11/00 , E05B 15/08 and E05B 17/14
E05B 13/06	covered by	E05B 11/00 , E05B 15/08 and E05B 17/14
E05B 13/08	covered by	E05B 13/00
E05B 15/12	covered by	E05B 17/2007
E05B 17/02	covered by	E05C 7/02

E05B 19/02	covered by	E05B 19/00
E05B 19/06	covered by	E05B 19/00
E05B 19/08	covered by	E05B 19/0017 , E05B 19/14 , E05B 35/003 and E05B 35/14
E05B 19/10	covered by	E05B 19/04
E05B 19/12	covered by	E05B 35/003
E05B 19/16	covered by	E05B 35/007 , E05B 27/0028 and E05B 29/0006
E05B 21/02-	covered by	E05B 21/00
E05B 21/04	covered by	E05B 21/00
E05B 25/00-E05B 25/10	covered by	E05B 21/00 and E05B 23/00
E05B 27/04-E05B 27/06	covered by	E05B 27/0003 - E05B 27/0096
E05B 29/02-E05B 29/14	covered by	E05B 29/0006 - E05B 29/0093
E05B 35/04	covered by	E05B 35/00
E05B 37/06	covered by	E05B 37/04 and E05B 67/00
E05B 37/18	covered by	E05B 37/16 and E05B 67/00
E05B 37/22	covered by	E05B 37/20 and E05B 67/00
E05B 45/14	covered by	E05B 45/06
E05B 47/04	covered by	E05B 47/02
E05B 47/08	covered by	E05B 47/06 and E05B 15/101
E05B 49/02-E05B 49/04	covered by	G07C 9/00
E05B 55/02	covered by	E05B 55/00
E05B 55/04	covered by	E05B 55/00 and E05B 13/00
E05B 55/08	covered by	E05B 55/06
E05B 55/10	covered by	E05B 55/06
E05B 55/14-E05B 55/16	covered by	E05B 55/00
E05B 59/02 - E05B 59/04	covered by	E05B 59/00
E05B 59/06	covered by	E05B 15/102
E05B 65/04	covered by	E05C 7/02
E05B 67/12	covered by	E05B 67/10
E05B 67/16	covered by	E05B 67/14
E05B 67/20	covered by	E05B 67/18
E05B 67/30	covered by	E05B 67/28
E05B 67/34	covered by	E05B 67/32
E05B 71/02	covered by	E05B 71/00 and E05B 37/00

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0118-F (E05F)

U	E05F 15/00	Power-operated mechanisms for wings (motor-operated accessories in locks for completing closing or initiating opening of a wing E05B 17/00)
U	E05F 15/60	• using electrical actuators
U	E05F 15/603	• • using rotary electromotors

M	E05F 15/632	<ul style="list-style-type: none"> • • • for horizontally-sliding wings <p><u>WARNING</u> Group E05F 15/632 is incomplete pending reclassification of documents from group E05F 15/652. Groups E05F 15/652 and E05F 15/632 should be considered in order to perform a complete search.</p>
U	E05F 15/635	<ul style="list-style-type: none"> • • • operated by push-pull mechanisms, e.g. flexible or rigid rack-and-pinion arrangements (E05F 15/652 takes precedence)
M	E05F 15/641	<ul style="list-style-type: none"> • • • • operated by friction wheels <p><u>WARNING</u> Group E05F 15/641 is incomplete pending reclassification of documents from group E05F 15/635. Groups E05F 15/635 and E05F 15/641 should be considered in order to perform a complete search.</p>
M	E05F 15/655	<ul style="list-style-type: none"> • • • specially adapted for vehicle wings <p><u>WARNING</u> Groups E05F 15/655 – E05F 15/662 are incomplete pending reclassification of documents from group E05F 15/632. Group E05F 15/632 and the appropriate group in E05F 15/655 – E05F 15/662 should be considered in order to perform a complete search.</p>
U	E05F 15/665	<ul style="list-style-type: none"> • • • for vertically-sliding wings
M	E05F 15/668	<ul style="list-style-type: none"> • • • • for overhead wings <p><u>WARNING</u> Group E05F 15/668 is incomplete pending reclassification of documents from group E05F 15/673. Groups E05F 15/673 and E05F 15/668 should be considered in order to perform a complete search.</p>

Project: RP0027 (E21B)

M	E21B	<p>EARTH DRILLING, e.g. DEEP DRILLING (mining, quarrying E21C; making shafts, driving galleries or tunnels E21D); OBTAINING OIL, GAS, WATER, SOLUBLE OR MELTABLE MATERIALS OR A SLURRY OF MINERALS FROM WELLS</p> <p><u>WARNINGS</u></p> <p>1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:</p> <table> <tr> <td>E21B 1/12 – E21B 1/38</td><td>covered by</td><td>E21B 1/00</td></tr> <tr> <td>E21B 7/08</td><td>covered by</td><td>E21B 7/06</td></tr> <tr> <td>E21B 11/04</td><td>covered by</td><td>E21B 27/00</td></tr> <tr> <td>E21B 23/12</td><td>covered by</td><td>E21B 23/002</td></tr> <tr> <td>E21B 31/08</td><td>covered by</td><td>E21B 27/00</td></tr> <tr> <td>E21B 43/22</td><td>covered by</td><td>C09K 8/58</td></tr> <tr> <td>E21B 43/27</td><td>covered by</td><td>E21B 43/26</td></tr> <tr> <td>E21B 47/001 – E21B 47/005</td><td>covered by</td><td>E21B 47/0001 – E21B 47/0005</td></tr> <tr> <td>E21B 47/007 – E21B 47/009</td><td>covered by</td><td>E21B 47/0006 – E21B 47/0008</td></tr> <tr> <td>E21B 47/013</td><td>covered by</td><td>E21B 47/01</td></tr> <tr> <td>E21B 47/017</td><td>covered by</td><td>E21B 47/011</td></tr> </table>	E21B 1/12 – E21B 1/38	covered by	E21B 1/00	E21B 7/08	covered by	E21B 7/06	E21B 11/04	covered by	E21B 27/00	E21B 23/12	covered by	E21B 23/002	E21B 31/08	covered by	E21B 27/00	E21B 43/22	covered by	C09K 8/58	E21B 43/27	covered by	E21B 43/26	E21B 47/001 – E21B 47/005	covered by	E21B 47/0001 – E21B 47/0005	E21B 47/007 – E21B 47/009	covered by	E21B 47/0006 – E21B 47/0008	E21B 47/013	covered by	E21B 47/01	E21B 47/017	covered by	E21B 47/011
E21B 1/12 – E21B 1/38	covered by	E21B 1/00																																	
E21B 7/08	covered by	E21B 7/06																																	
E21B 11/04	covered by	E21B 27/00																																	
E21B 23/12	covered by	E21B 23/002																																	
E21B 31/08	covered by	E21B 27/00																																	
E21B 43/22	covered by	C09K 8/58																																	
E21B 43/27	covered by	E21B 43/26																																	
E21B 47/001 – E21B 47/005	covered by	E21B 47/0001 – E21B 47/0005																																	
E21B 47/007 – E21B 47/009	covered by	E21B 47/0006 – E21B 47/0008																																	
E21B 47/013	covered by	E21B 47/01																																	
E21B 47/017	covered by	E21B 47/011																																	

E21B-47/0224-E21B-47/0236	covered by	E21B-47/02208-- E21B-47/02232
E21B-47/047-E21B-47/053	covered by	E21B-47/042--E21B-47/044
E21B-47/07	covered by	E21B-47/065
E21B-47/085	covered by	E21B-47/082
E21B-47/092-E21B-47/098	covered by	E21B-47/0905-- E21B-47/0915
E21B-47/103-E21B-47/117	covered by	E21B-47/1005-- E21B-47/1025
E21B-47/125-E21B-47/135	covered by	E21B-47/121--E21B-47/123
E21B-47/20-E21B-47/24	covered by	E21B-47/182--E21B-47/187
E21B-47/26	covered by	E21B-47/124

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

C E21B 1/00

Percussion drilling (drives used in the borehole E21B 4/00; ~~rotary drilling machines in general B23B~~)

NOTE

When classifying in groups E21B 1/12 - E21B 1/38, a symbol from one of the following main groups of B25D should also be given:

- B25D 9/00 Portable percussive tools with fluid-pressure drives
- B25D 11/00 Portable percussive tools with motor drive
- B25D 16/00 Portable percussive machines with superimposed rotation
- B25D 17/00 Details of, or accessories for, portable power-driven percussive tools

WARNING

Group E21B 1/00 is impacted by reclassification into groups E21B 1/12, E21B 1/14, E21B 1/16, E21B 1/18, E21B 1/20, E21B 1/22, E21B 1/24, E21B 1/26, E21B 1/28, E21B 1/30, E21B 1/32, E21B 1/34, E21B 1/36, and E21B 1/38.

All groups listed in this Warning should be considered in order to perform a complete search.

C E21B 1/02

- Surface drives for ~~percussion drilling~~ drop hammers {or percussion drilling}, e.g. with a cable

WARNING

Group E21B 1/02 is incomplete pending reclassification of documents from group E21B 1/12.

Group E21B 1/02 is also impacted by reclassification into groups E21B 1/04, E21B 1/36 and E21B 1/38.

All groups listed in this Warning should be considered in order to perform a complete search.

T E21B 1/04

- • Devices for reversing the movement of the rod or cable at the surface ~~{(not used, see E21B 1/02)}~~

WARNING

Group E21B 1/04 is incomplete pending reclassification of documents from groups E21B 1/02 and E21B 1/12.

All groups listed in this Warning should be considered in order to perform a complete search.

- Q E21B 1/12
- with a reciprocating impulse member ([E21B 1/02](#), [E21B 1/38](#) take precedence)
- WARNING
 Group [E21B 1/12](#) is incomplete pending reclassification of documents from group [E21B 1/00](#).
 Group [E21B 1/12](#) is also impacted by reclassification into groups [E21B 1/02](#), [E21B 1/04](#), [E21B 1/14](#), [E21B 1/16](#), [E21B 1/18](#), [E21B 1/20](#), [E21B 1/22](#), [E21B 1/24](#), [E21B 1/26](#), [E21B 1/28](#), [E21B 1/30](#), [E21B 1/32](#), [E21B 1/34](#) and [E21B 1/38](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N E21B 1/14
- • driven by a rotating mechanism
- WARNING
 Groups [E21B 1/14](#) - [E21B 1/20](#) are incomplete pending reclassification of documents from groups [E21B 1/00](#) and [E21B 1/12](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N E21B 1/16
- • • with spring-mounted reciprocating masses, e.g. with air cushion
- N E21B 1/18
- • • • with elastic joining of the drive to the push-rod by double buffer springs
- N E21B 1/20
- • • formed as centrifugal hammers
- N E21B 1/22
- • driven by electromagnets
- WARNING
 Group [E21B 1/22](#) is incomplete pending reclassification of documents from groups [E21B 1/00](#) and [E21B 1/12](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N E21B 1/24
- • the impulse member being a piston driven directly by fluid pressure
- WARNING
 Groups [E21B 1/24](#) - [E21B 1/34](#) are incomplete pending reclassification of documents from groups [E21B 1/00](#) and [E21B 1/12](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N E21B 1/26
- • • by liquid pressure
- N E21B 1/28
- • • • working with pulses
- N E21B 1/30
- • • by air, steam or gas pressure
- N E21B 1/32
- • • • working with pulses
- N E21B 1/34
- • • • • the impulse member being a piston of an internal-combustion engine
- N E21B 1/36
- Tool-carrier piston type, i.e. in which the tool is connected to an impulse member
- WARNING
 Group [E21B 1/36](#) is incomplete pending reclassification of documents from groups [E21B 1/00](#), [E21B 1/02](#) and [E21B 1/12](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N E21B 1/38
- Hammer piston type, i.e. in which the tool bit or anvil is hit by an impulse member
- WARNING
 Group [E21B 1/38](#) is incomplete pending reclassification of documents from groups [E21B 1/00](#), [E21B 1/02](#) and [E21B 1/12](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C E21B 3/00

Rotary drilling (drives used in the borehole [E21B 4/00](#); rotary drilling machines in general [B23B](#))

WARNING

Group [E21B 3/00](#) is impacted by reclassification into groups [E21B 3/02](#), [E21B 3/022](#), [E21B 3/025](#), [E21B 3/03](#), [E21B 3/035](#), [E21B 3/04](#), [E21B 3/045](#), and [E21B 3/06](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C E21B 3/02

- Surface drives for rotary drilling

WARNING

Group [E21B 3/02](#) is incomplete pending reclassification of documents from group [E21B 3/00](#).

Group [E21B 3/02](#) is also impacted by reclassification into group [E21B 3/022](#). Groups [E21B 3/00](#), [E21B 3/02](#), and [E21B 3/022](#) should be considered in order to perform a complete search.

N E21B 3/022

- {Top drives}

WARNING

Group [E21B 3/022](#) is incomplete pending reclassification of documents from groups [E21B 3/00](#) and [E21B 3/02](#).

Groups [E21B 3/00](#), [E21B 3/02](#), and [E21B 3/022](#) should be considered in order to perform a complete search.

M E21B 3/025

- with a to-and-fro rotation of the tool

WARNING

Group [E21B 3/025](#) is incomplete pending reclassification of documents from group [E21B 3/00](#).

Groups [E21B 3/00](#) and [E21B 3/025](#) should be considered in order to perform a complete search.

M E21B 3/03

- with an intermittent unidirectional rotation of the tool

WARNING

Group [E21B 3/03](#) is incomplete pending reclassification of documents from group [E21B 3/00](#).

Groups [E21B 3/00](#) and [E21B 3/03](#) should be considered in order to perform a complete search.

M E21B 3/035

- with slipping or elastic transmission

WARNING

Group [E21B 3/035](#) is incomplete pending reclassification of documents from group [E21B 3/00](#).

Groups [E21B 3/00](#) and [E21B 3/035](#) should be considered in order to perform a complete search.

M E21B 3/04

- Rotary tables {(portable drilling rigs with rotary tables [E21B 7/021](#))}

WARNING

Groups [E21B 3/04](#) – [E21B 3/06](#) are incomplete pending reclassification of documents from group [E21B 3/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 3/045
- • {movably mounted on the drilling structure or platform (derricks adapted to be moved on their substructure [E21B 15/003](#); ~~specifically adapted for underwater drilling, E21B-15/02~~)}
- D E21B 2003/05
- • {with a to-and-fro rotation of the drill pipe or casing}
 - <administratively transferred to [E21B 3/025](#) INV>
- M E21B 4/00** **Drives *for drilling*, used in the borehole**
- M E21B 4/003
- {Bearing, sealing, lubricating details (for roller bits [E21B 10/22](#); ~~bearings in general F16C; sealing in general F16J; lubricating in general F16N~~)}
- M E21B 4/006
- {Mechanical motion converting means, e.g. reduction gearings ([E21B 4/10](#) takes precedence; ~~gearings in general F16H~~)}
- M E21B 6/00** **Drives for *combined percussion and rotary drilling* *drilling with combined rotary and percussive action* (drives used in the borehole [E21B 4/00](#); *portable percussive machines with superimposed rotation* [B25D 16/00](#))**
- U E21B 7/00** **Special methods or apparatus for drilling**
- M E21B 7/003
- {Drilling with mechanical conveying means (~~bailers, e.g. baskets, buckets E21B 27/00~~; tunnelling [E21D](#))}
- U E21B 7/005
- • {with helical conveying means ([E21B 7/201](#) takes precedence; augers [E21B 10/44](#); drilling rods or pipes with helical structure [E21B 17/22](#))}
- M E21B 7/006
- • {combined with a bucket-type container (~~bailers with helical conveying means E21B 27/04~~)}
- M E21B 7/007
- {Drilling by use of explosives (underwater drilling using explosives [E21B 7/1245](#); ~~setting tools actuated by explosives E21B 23/04, E21B 23/065; cutting or destroying objects in boreholes by explosives E21B 29/02; freeing objects using explosives E21B 31/1075; gun or shaped-charge perforators E21B 43/116; fracturing by explosives E21B 43/263, E21B 43/248; taking samples using explosives E21B 49/04~~)}
- M E21B 7/02
- *Portable drilling rigs, truck or skid-mounted, with their own drive* *Drilling rigs characterized by means for land transport {with their own drive}, e.g. skid mounting or wheel mounting* (portable drilling rigs for use on underwater floors [E21B 7/124](#))
- M E21B 7/021
- • {With a rotary table, i.e. a fixed rotary drive for a relatively advancing tool (~~rotary tables E21B 3/04~~)}
- U E21B 7/027
- • {Drills for drilling shallow holes, e.g. for taking soil samples or for drilling postholes}
- M E21B 7/028
- • {the drilling apparatus being detachable from the vehicle, e.g. hand portable drills}
- WARNING**

Group [E21B 7/028](#) is incomplete pending reclassification of documents from group [E21B 11/005](#).

Groups [E21B 11/005](#) and [E21B 7/028](#) should be considered in order to perform a complete search.
- M E21B 7/04
- Directional drilling {(derricks or masts specially adapted therefor [E21B 15/04](#))}
- M E21B 7/06
- • Deflecting the direction of boreholes (~~directional window cutting E21B 29/06; deflecting the direction of fishing tools E21B 31/14~~)}
- M E21B 7/12
- Underwater drilling ({derricks or masts specially adapted therefor [E21B 15/02](#); telescoping joints [E21B 17/07](#); using heave compensators [E21B 19/09](#); *well heads specially adapted for underwater installations* [E21B 33/035](#))
- M E21B 7/128
- • from floating support with independent underwater anchored guide base (~~guide line systems E21B 41/10~~)}
- M E21B 7/14
- Drilling by use of heat, e.g. flame drilling (~~by use of explosives E21B 7/007~~)}

- M E21B 7/18
- Drilling by liquid or gas jets, with or without entrained pellets ([E21B 7/14](#) takes precedence ~~{; obtaining a slurry of minerals E21B 43/29}~~; hydraulic monitors [E21C 45/00](#))
- M E21B 7/20
- Driving or forcing casings or pipes into boreholes, e.g. sinking; Simultaneously drilling and casing boreholes (surface means for applying to-and-fro rotation movements to the casing [E21B 3/025](#); ~~{pushing means outside of the borehole E21B 19/08}~~; placing piles [E02D 7/00](#); sinking shafts while moving the lining downwards [E21D 1/08](#) {; making galleries by forcing prefabricated elements through the ground [E21D 9/005](#))
- M E21B 7/201
- {with helical conveying means ~~{drilling with helical conveying means E21B 7/005; augers E21B 10/44; drilling rods or pipes with helical structure E21B 17/22}~~}
- M E21B 7/203
- • {using down-hole drives ~~{down-hole drives per se E21B 4/00}~~}
- U E21B 7/205
- {without earth removal ([E21B 7/30](#) takes precedence)}
- NOTE**
Special methods or apparatus for drilling without earth removal [E21B 7/26](#)
- M E21B 7/206
- • {using down-hole drives ~~{down-hole drives per se E21B 4/00}~~}
- M E21B 7/208
- {using down-hole drives (~~down-hole drives per se E21B 4/00~~; [E21B 7/203](#) and [E21B 7/206](#) take precedence)}
- C E21B 7/26
- Drilling without earth removal, e.g. with self-propelled burrowing devices (~~{E21B 7/205 and} E21B 7/30 take~~[takes](#) precedence; down-hole drives [E21B 4/00](#); ~~{~~ e.g. self-propelled fluid-operated hammers [E21B 4/145](#))
- WARNING**
Group [E21B 7/26](#) is impacted by reclassification into group [E21B 7/267](#). Groups [E21B 7/26](#) and [E21B 7/267](#) should be considered in order to perform a complete search.
- C E21B 7/265
- {Combined with earth removal}
- WARNING**
Group [E21B 7/265](#) is impacted by reclassification into group [E21B 7/267](#). Groups [E21B 7/265](#) and [E21B 7/267](#) should be considered in order to perform a complete search.
- N E21B 7/267
- {Drilling devices with senders, e.g. radio-transmitters for position of drilling tool}
- WARNING**
Group [E21B 7/267](#) is incomplete pending reclassification of documents from groups [E21B 7/26](#) and [E21B 7/265](#). Groups [E21B 7/26](#), [E21B 7/265](#), and [E21B 7/267](#) should be considered in order to perform a complete search.
- U E21B 10/00**
- Drill bits (specially adapted for deflecting the direction of boring [E21B 7/064](#); with means for collecting substances [E21B 27/00](#))**
- U E21B 10/08
- Roller bits (roller core bits [E21B 10/06](#); with leading portion [E21B 10/26](#); characterised by wear resisting parts [E21B 10/46](#))
- U E21B 10/22
- • characterised by bearing, lubrication or sealing details
- D E21B 2010/225
- • • {sealing details}
- <administratively transferred to [E21B 10/25](#) INV>
- U E21B 10/24
- • • characterised by lubricating details
- D E21B 2010/243
- • • • {with drilling fluid supply to the bearing}
- <administratively transferred to [E21B 10/23](#) INV>

- C E21B 10/26
- Drill bits with leading portion, i.e. drill bits with a pilot cutter; Drill bits for enlarging the borehole, e.g. reamers (percussion drill bits with leading portion [E21B 10/40](#); augers with leading portion [E21B 10/44](#))
- WARNING**
Group [E21B 10/26](#) is impacted by reclassification into group [E21B 10/265](#). Groups [E21B 10/26](#) and [E21B 10/265](#) should be considered in order to perform a complete search.
- N E21B 10/265
- {Bi-center drill bits, i.e. an integral bit and eccentric reamer used to simultaneously drill and underream the hole}
- WARNING**
Group [E21B 10/265](#) is incomplete pending reclassification of documents from groups [E21B 10/26](#), [E21B 10/28](#), [E21B 10/30](#), [E21B 10/32](#), [E21B 10/322](#), [E21B 10/325](#), [E21B 10/327](#), [E21B 10/34](#), and [E21B 10/345](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C E21B 10/28
- with non-expandable roller cutters
- WARNING**
Group [E21B 10/28](#) is impacted by reclassification into group [E21B 10/265](#). Groups [E21B 10/28](#) and [E21B 10/265](#) should be considered in order to perform a complete search.
- C E21B 10/30
- Longitudinal axis roller reamers, e.g. reamer stabilisers
- WARNING**
Group [E21B 10/30](#) is impacted by reclassification into group [E21B 10/265](#). Groups [E21B 10/30](#) and [E21B 10/265](#) should be considered in order to perform a complete search.
- C E21B 10/32
- with expandable cutting tools
- WARNING**
Group [E21B 10/32](#) is impacted by reclassification into group [E21B 10/265](#). Groups [E21B 10/32](#) and [E21B 10/265](#) should be considered in order to perform a complete search.
- C E21B 10/322
- {cutter shifted by fluid pressure ([E21B 10/345](#) takes precedence)}
- WARNING**
Group [E21B 10/322](#) is impacted by reclassification into group [E21B 10/265](#). Groups [E21B 10/322](#) and [E21B 10/265](#) should be considered in order to perform a complete search.
- C E21B 10/325
- {the cutter being shifted by a spring mechanism}
- WARNING**
Group [E21B 10/325](#) is impacted by reclassification into group [E21B 10/265](#). Groups [E21B 10/325](#) and [E21B 10/265](#) should be considered in order to perform a complete search.
- C E21B 10/327
- {the cutter being pivoted about a longitudinal axis ([E21B 10/34](#) takes precedence)}
- WARNING**
Group [E21B 10/327](#) is impacted by reclassification into group [E21B 10/265](#). Groups [E21B 10/327](#) and [E21B 10/265](#) should be considered in order to perform a complete search.

- C E21B 10/34
- • • of roller-cutter type
- WARNING**
Group E21B 10/34 is impacted by reclassification into group E21B 10/265. Groups E21B 10/34 and E21B 10/265 should be considered in order to perform a complete search.
- C E21B 10/345
- • • {cutter shifted by fluid pressure}
- WARNING**
Group E21B 10/345 is impacted by reclassification into group E21B 10/265. Groups E21B 10/345 and E21B 10/265 should be considered in order to perform a complete search.
- M E21B 10/36
- Percussion drill bits (~~characterised by wear resisting parts E21B 10/46~~ {- {with helical conveying portion E21B 10/445};} ~~characterised by wear resisting parts E21B 10/46~~)
- C E21B 10/42
- Rotary drag type drill bits with teeth, blades or like cutting elements, e.g. fork-type bits, fish tail bits (characterised by wear resisting parts {E21B 10/54, ~~by conduits or nozzles for drilling fluid E21B 10/60~~, ~~by detachable or adjustable parts E21B 10/62~~}; ~~by conduits or nozzles for drilling fluid E21B 10/60~~; ~~by detachable or adjustable parts E21B 10/62~~)
- WARNING**
Group E21B 10/42 is impacted by reclassification into groups E21B 10/62, E21B 10/627, and E21B 10/633. All groups listed in this Warning should be considered in order to perform a complete search.
- D E21B 2010/425
- • {characterised by teeth or cutter arrangement}
- <administratively transferred to E21B 10/43 INV>
- C E21B 10/43
- • characterised by the arrangement of teeth or other cutting elements
- WARNING**
Group E21B 10/43 is impacted by reclassification into groups E21B 10/62, E21B 10/627, and E21B 10/633. All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 10/44
- Bits with helical conveying portion, e.g. screw type bits; Augers with leading portion or with detachable parts (~~{Rotary drag type drill bits E21B 10/42};~~ E21B 10/42 takes precedence; drilling rods with helical structure E21B 17/22)
- M E21B 10/445
- • {percussion type, e.g. for masonry (~~percussion drill bits in general E21B 10/36~~)}
- M E21B 10/46
- characterised by wear resisting parts, e.g. diamond inserts ~~{(drill bits with self-renewable cutting edge E21B 10/006)}~~
- M E21B 10/48
- • the bit being of core type ~~{(saw cylinders having their cutting rim equipped with abrasive particles for drilling stone or glass B28D 1/041)}~~
- U E21B 10/50
- • the bit being of roller type
- M E21B 10/52
- • • with chisel- or button-type inserts
- U E21B 10/54
- • the bit being of the rotary drag type, e.g. fork-type bits
- D E21B 2010/545
- • • {with blades having performed cutting elements mounted on a distinct support, e.g. polycrystalline inserts}
- <administratively transferred to E21B 10/55 INV>

- T E21B 10/55
- • • with preformed cutting elements ~~{with blades having preformed cutting elements mounted on a distinct support, e.g. polycrystalline inserts}~~ *(inserts per se E21B 10/56, E21B 10/58)*
- M E21B 10/56
- • Button-type inserts (E21B 10/52 takes precedence)
- D E21B 2010/561
- • • ~~{Inserts with performed cutting elements mounted on a distinct support, e.g. polycrystalline inserts}~~
 - <administratively transferred to E21B 10/567 INV>
- D E21B 2010/562
- • • • ~~{having a non planar or non circular cutting face}~~
 - <administratively transferred to E21B 10/5673 INV>
- D E21B 2010/563
- • • • ~~{having a cutting face with different segments, e.g. mosaic-type inserts}~~
 - <administratively transferred to E21B 10/5676 INV>
- D E21B 2010/564
- • • • ~~{characterised by support details}~~
 - <administratively transferred to E21B 10/573 INV>
- D E21B 2010/565
- • • • • ~~{Interface between the substrate and the cutting element}~~
 - <administratively transferred to E21B 10/5735 INV>
- D E21B 2010/566
- • • • • ~~{with chip breaking arrangements}~~
 - <administratively transferred to E21B 10/5671 INV>
- C E21B 10/567
- • • with preformed cutting elements mounted on a distinct support, e.g. polycrystalline inserts
- WARNING**
*Group E21B 10/567 is impacted by reclassification into group E21B 10/5671.
 Groups E21B 10/567 and E21B 10/5671 should be considered in order to perform a complete search.*
- N E21B 10/5671
- • • • • ~~{with chip breaking arrangements}~~
- WARNING**
*Group E21B 10/5671 is incomplete pending reclassification of documents from groups E21B 10/567 and E21B 10/5673.
 Groups E21B 10/567, E21B 10/5673, and E21B 10/5671 should be considered in order to perform a complete search.*
- C E21B 10/5673
- • • • • ~~{having a non planar or non circular cutting face}~~
- WARNING**
*Group E21B 10/5673 is impacted by reclassification into group E21B 10/5671.
 Groups E21B 10/5673 and E21B 10/5671 should be considered in order to perform a complete search.*
- T E21B 10/573
- • • • characterised by support details, *e.g. the substrate construction or the interface between the substrate and the cutting element*
- M E21B 10/58
- • Chisel-type inserts ({E21B 10/485,} E21B 10/52, E21B 10/54 take precedence)
- M E21B 10/60
- characterised by conduits or nozzles for drilling fluids (for roller bits E21B 10/18; for percussion drill bits E21B 10/38 ~~{; mining picks with arrangement of fluid-spraying nozzles E21C 35/187}~~)
- D E21B 2010/607
- • {characterised by the nozzle structure}
 - <administratively transferred to E21B 10/61 INV>

T	E21B 10/62	<ul style="list-style-type: none"> characterised by parts, e.g. cutting elements, which are detachable or adjustable (E21B 10/64 takes precedence; for roller bits E21B 10/20; for rotary drag type drill bits E21B 10/42; for augers E21B 10/44) <p>WARNING <i>Groups E21B 10/62 - E21B 10/633 are incomplete pending reclassification of documents from groups E21B 10/42 and E21B 10/43. All groups listed in this Warning should be considered in order to perform a complete search.</i></p>
D	E21B 2010/622	<ul style="list-style-type: none"> {with plural separable cutter elements} <p><administratively transferred to E21B 10/627 INV></p>
D	E21B 2010/624	<ul style="list-style-type: none"> {independently attachable} <p><administratively transferred to E21B 10/633 INV></p>
C	E21B 11/00	<p>Other drilling tools {(boring grabs E21B 27/00)}</p> <p>WARNING <i>Group E21B 11/00 is impacted by reclassification into group E21B 11/04. Groups E21B 11/00 and E21B 11/04 should be considered in order to perform a complete search.</i></p>
C	E21B 11/005	<ul style="list-style-type: none"> {Hand operated drilling tools (<i>hand portable tools detachable from portable drilling rigs E21B 7/028</i>)} <p>WARNING <i>Group E21B 11/005 is impacted by reclassification into group E21B 7/028. Groups E21B 11/005 and E21B 7/028 should be considered in order to perform a complete search.</i></p>
U	E21B 11/02	<ul style="list-style-type: none"> Boring rams (percussion drives used in the borehole E21B 4/06; percussion drill bits E21B 10/36)
N	E21B 11/04	<ul style="list-style-type: none"> Boring grabs <p>WARNING <i>Group E21B 11/04 is incomplete pending reclassification of documents from groups E21B 11/00 and E21B 27/00. Groups E21B 11/00, E21B 27/00, and E21B 11/04 should be considered in order to perform a complete search.</i></p>
M	E21B 12/00	<p>Accessories for drilling tools {(connecting and disconnecting drill bit and drilling pipe E21B 19/18; sharpening stone drill bits B24B 3/33)}</p>
M	E21B 15/00	<p>Derricks <i>Supports for the drilling machine, e.g. derricks or masts</i>; Masts; {Other supports (drill rigs with movable understructures E21B 7/02)}</p>
M	E21B 15/003	<ul style="list-style-type: none"> {adapted to be moved on their substructure, e.g. with skidding means; adapted to drill a plurality of wells (slant-hole rigs E21B 15/04)}
M	E21B 15/02	<ul style="list-style-type: none"> specialy adapted for underwater drilling (E21B 15/04 takes precedence; floating drilling platforms B63B 35/44; drilling platforms on legs E02B 17/00 with skidding means E21B 15/003)
M	E21B 15/04	<ul style="list-style-type: none"> specialy adapted for directional drilling, e.g. slant hole rigs {(with skidding means E21B 15/003)}
M	E21B 17/00	<p>Drilling rods or pipes; Flexible drill strings; Kellies; Drill collars; Sucker rods ; Cables; <i>Cables</i>; Casings; Tubings (rod couplings in general F16D; tubes or tube couplings in general F16L)</p>

- M E21B 17/01
- Risers (~~{connections between riser sections E21B 17/085; {supporting a riser from a drilling or production platform E21B 19/004};}~~ riser connectors {on well heads} E21B 33/038)
- C E21B 17/02
- Couplings; joints {(expandable couplings or joints E21B 43/106)}
- WARNING**
Group E21B 17/02 is impacted by reclassification into group E21B 17/041. Groups E21B 17/02 and E21B 17/041 should be considered in order to perform a complete search.
- M E21B 17/021
- {Devices for subsurface connecting or disconnecting by rotation (~~connecting or disconnecting pipe couplings or joints E21B 19/16; fishing tools for frozen rods, casings, ropes, bits or the like E21B 31/00~~)}
- U E21B 17/023
- {Arrangements for connecting cables or wirelines to downhole devices}
- M E21B 17/026
- • {Arrangements for fixing cables or wirelines to the outside of downhole devices (~~protectors and centralisers for cables and control lines E21B 17/1035~~)}
- C E21B 17/028
- {Electrical or electro-magnetic connections}
- WARNING**
Group E21B 17/028 is impacted by reclassification into groups E21B 17/0283 and E21B 17/0285. Groups E21B 17/028, E21B 17/0283, and E21B 17/0285 should be considered in order to perform a complete search.
- N E21B 17/0283
- • {characterised by the coupling being contactless, e.g. inductive}
- WARNING**
Group E21B 17/0283 is incomplete pending reclassification of documents from group E21B 17/028. Groups E21B 17/028 and E21B 17/0283 should be considered in order to perform a complete search.
- N E21B 17/0285
- • {characterised by electrically insulating elements}
- WARNING**
Group E21B 17/0285 is incomplete pending reclassification of documents from group E21B 17/028. Groups E21B 17/028 and E21B 17/0285 should be considered in order to perform a complete search.
- M E21B 17/03
- • between drilling rod or pipe and drill motor **{for surface drive}**, e.g. between drilling rod and hammer
- C E21B 17/04
- • between rod {or the like} and bit or between rod and rod {or the like}
- WARNING**
Group E21B 17/04 is impacted by reclassification into group E21B 17/041. Groups E21B 17/04 and E21B 17/041 should be considered in order to perform a complete search.
- N E21B 17/041
- • {specially adapted for coiled tubing}
- WARNING**
Group E21B 17/041 is incomplete pending reclassification of documents from groups E21B 17/02 and E21B 17/04. Groups E21B 17/02, E21B 17/04, and E21B 17/041 should be considered in order to perform a complete search.
- M E21B 17/042
- • threaded **{Threaded}**(~~readily releasing joints E21B 17/06~~)

- C E21B 17/046
- • • with ribs, pins, or jaws, and complementary grooves or the like, e.g. bayonet catches
- WARNING**
 Group [E21B 17/046](#) is impacted by reclassification into group [E21B 17/0465](#).
 Groups [E21B 17/046](#) and [E21B 17/0465](#) should be considered in order to perform a complete search.
- N E21B 17/0465
- • • {characterised by radially inserted locking elements}
- WARNING**
 Group [E21B 17/0465](#) is incomplete pending reclassification of documents from group [E21B 17/046](#).
 Groups [E21B 17/046](#) and [E21B 17/0465](#) should be considered in order to perform a complete search.
- M E21B 17/07
- • • Telescoping joints for varying drill string lengths; Shock absorbers (heave compensators in the derrick [E21B 19/09](#); releasing-jars [E21B 31/107](#) - ~~shock-absorbers in general F16F~~)
- U E21B 17/08
- • Casing joints
- C E21B 17/085
- • • {Riser connections (connectors for wellhead [E21B 33/038](#))}
- WARNING**
 Group [E21B 17/085](#) is impacted by reclassification into group [E21B 17/0853](#).
 Groups [E21B 17/085](#) and [E21B 17/0853](#) should be considered in order to perform a complete search.
- N E21B 17/0853
- • • {Connections between sections of riser provided with auxiliary lines, e.g. kill and choke lines}
- WARNING**
 Group [E21B 17/0853](#) is incomplete pending reclassification of documents from group [E21B 17/085](#).
 Groups [E21B 17/085](#) and [E21B 17/0853](#) should be considered in order to perform a complete search.
- M E21B 17/10
- Wear protectors; Centralising devices, { e.g. stabilisers } (drives used in the borehole with anchoring means [E21B 4/18](#); guiding or centralising devices outside the borehole [E21B 19/24](#))
- U E21B 17/1014
- • {Flexible or expansible centering means, e.g. with pistons pressing against the wall of the well ([E21B 17/1042](#) takes precedence)}
- M E21B 17/1021
- • • {with articulated arms or arcuate springs - ~~(measuring the diameter E21B 47/08)~~}
- M E21B 17/18
- Pipes provided with plural fluid passages ({[E21B 17/203](#) takes precedence;} circulation of drilling fluid by means of such pipes [E21B 21/12](#) - ~~general F16L 39/00~~)
- M E21B 17/20
- Flexible or articulated drilling pipes {, e.g. flexible or articulated rods, pipes or cables - ~~(risers E21B 17/01; swivel joints E21B 17/05)~~}
- M E21B 17/206
- • {with conductors, e.g. electrical, optical - ~~(hoses with electrically conducting means in general F16L 11/127)~~}
- M E21B 19/00
- Handling rods, casings, tubes or the like outside the borehole, e.g. in the derrick (surface drives [E21B 1/02](#), [E21B 3/02](#)); Apparatus for feeding the rods or cables (surface drives [E21B 1/02](#), [E21B 3/02](#))**
- M E21B 19/002
- {specially adapted for underwater drilling ([E21B 19/09](#), [E21B 19/143](#) take precedence; ~~risers with buoyancy elements E21B 17/012, E21B 17/015~~)}

- M E21B 19/008 • {Winding units, specially adapted for drilling operations (~~capstans, winches B66D; cathead-actuated pipe wrenches or spinners E21B 19/162~~)}
- U E21B 19/02 • Rod or cable suspensions (load-engaging elements for hoisting or lowering purposes in general [B66C 1/00](#); crown blocks or pulley blocks [B66D](#); cable guides [B66D 1/36](#))
- M E21B 19/06 • • Elevators, i.e. rod- or tube-gripping devices
- M E21B 19/07 • • • Slip-type elevators (~~slips E21B 19/10~~ [slips in rotary tables E21B 19/10](#))
- C E21B 19/08 • Apparatus for feeding the rods or cables ([E21B 19/22](#) takes precedence; automatic feed [E21B 44/02](#); hoisting drums [B66D](#)); Apparatus for increasing or decreasing the pressure on the drilling tool; Apparatus for counterbalancing the weight of the rods

WARNING

Group [E21B 19/08](#) is impacted by reclassification into groups [E21B 19/081](#), [E21B 19/083](#), [E21B 19/084](#), [E21B 19/086](#), [E21B 19/087](#), [E21B 19/089](#), and [E21B 19/09](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 19/081 • • Screw-and-nut feed mechanisms

WARNING

Group [E21B 19/081](#) is incomplete pending reclassification of documents from group [E21B 19/08](#).

Groups [E21B 19/08](#) and [E21B 19/081](#) should be considered in order to perform a complete search.

- M E21B 19/083 • • Cam, rack or like feed mechanisms

WARNING

Group [E21B 19/083](#) is incomplete pending reclassification of documents from group [E21B 19/08](#).

Groups [E21B 19/08](#) and [E21B 19/083](#) should be considered in order to perform a complete search.

- M E21B 19/084 • • with flexible drawing means, e.g. cables

WARNING

Group [E21B 19/084](#) is incomplete pending reclassification of documents from group [E21B 19/08](#).

Groups [E21B 19/08](#) and [E21B 19/084](#) should be considered in order to perform a complete search.

- M E21B 19/086 • • with a fluid-actuated cylinder ([E21B 19/084](#), [E21B 19/087](#), [E21B 19/09](#) take precedence)

WARNING

Group [E21B 19/086](#) is incomplete pending reclassification of documents from group [E21B 19/08](#).

Groups [E21B 19/08](#) and [E21B 19/086](#) should be considered in order to perform a complete search.

- M E21B 19/087 • • by means of a swinging arm

WARNING

Group [E21B 19/087](#) is incomplete pending reclassification of documents from group [E21B 19/08](#).

Groups [E21B 19/08](#) and [E21B 19/087](#) should be considered in order to perform a complete search.

- M E21B 19/089
- with a spring or an additional weight
- WARNING**
*Group E21B 19/089 is incomplete pending reclassification of documents from group E21B 19/08.
 Groups E21B 19/08 and E21B 19/089 should be considered in order to perform a complete search.*
- M E21B 19/09
- specially adapted for drilling underwater formations from a floating support using heave compensators supporting the drill string (drilling-pipe telescoping joints [E21B 17/07](#) {; heave compensators for supporting a riser [E21B 19/006](#)})
- WARNING**
*Group E21B 19/09 is incomplete pending reclassification of documents from group E21B 19/08.
 Groups E21B 19/08 and E21B 19/09 should be considered in order to perform a complete search.*
- C E21B 19/10
- Slips; Spiders {; Catching devices (rotary tables with master bushing or kelly bushing [E21B 3/04](#); ~~slip-type elevators E21B 19/07~~; ~~casing heads with slips E21B 33/0422~~)}
- WARNING**
*Group E21B 19/10 is impacted by reclassification into group E21B 19/102.
 Groups E21B 19/10 and E21B 19/102 should be considered in order to perform a complete search.*
- N E21B 19/102
- {using rollers or spherical balls as load gripping elements}
- WARNING**
*Group [E21B 19/102](#) is incomplete pending reclassification of documents from group [E21B 19/10](#).
 Groups [E21B 19/10](#) and [E21B 19/102](#) should be considered in order to perform a complete search.*
- M E21B 19/12
- *Rope clamps* {; ~~Rope clamps (rope clamps in general F16G 11/00)~~{~~rod Rod~~, casings or tube clamps not secured to elevators} (*rope clamps in general F16G 11/00*)
- M E21B 19/14
- Racks, ramps, troughs or bins, for holding the lengths of rod singly or connected; Handling between storage place and borehole ([E21B 19/20](#), [E21B 19/22](#) take precedence {; ~~storing elongated articles in general B65G 1/0442~~)
- C E21B 21/00
- Methods or apparatus for flushing boreholes, e.g. by use of exhaust air from motor (freeing objects stuck in boreholes by flushing [E21B 31/03](#); well drilling compositions [C09K 8/02](#))**
- WARNING**
*Group E21B 21/00 is impacted by reclassification into groups [E21B 21/001](#), [E21B 21/002](#), [E21B 21/003](#), [E21B 21/01](#), [E21B 21/012](#), [E21B 21/015](#), [E21B 21/019](#), [E21B 21/02](#), [E21B 21/06](#), [E21B 21/062](#), [E21B 21/063](#), [E21B 21/065](#), [E21B 21/066](#), [E21B 21/067](#), [E21B 21/068](#), [E21B 21/07](#), [E21B 21/08](#), [E21B 21/082](#), [E21B 21/085](#), [E21B 21/10](#), [E21B 21/103](#), [E21B 21/106](#), [E21B 21/12](#), [E21B 21/14](#), [E21B 21/16](#), and [E21B 21/18](#).
 All groups listed in this Warning should be considered in order to perform a complete search.*

- C E21B 21/001
- {specially adapted for underwater drilling (*dual gradient drilling E21B 21/082*)}
- WARNING**
Group E21B 21/001 is incomplete pending reclassification of documents from group E21B 21/00.
Group E21B 21/001 is also impacted by reclassification into group E21B 21/082.
Groups E21B 21/00, E21B 21/001, and E21B 21/082 should be considered in order to perform a complete search.
- M E21B 21/002
- {Down-hole drilling fluid separation systems (containers comprising collecting means with a strainer [E21B 27/005](#); subsoil filtering [E21B 43/02](#); down-hole production separators [E21B 43/38](#))}
- WARNING**
Group E21B 21/002 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/002 should be considered in order to perform a complete search.
- M E21B 21/003
- {Means for stopping loss of drilling fluid (plastering the borehole wall [E21B 33/138](#))}
- WARNING**
Group E21B 21/003 is incomplete pending reclassification of documents from group E21B 21/00.
Groups E21B 21/00 and E21B 21/003 should be considered in order to perform a complete search.
- D E21B 2021/005
- {~~using gaseous fluids~~
- <administratively transferred to [E21B 21/16](#) INV>
- D E21B 2021/006
- {~~Underbalanced techniques, i.e. where borehole fluid pressure is below formation pressure~~
- <administratively transferred to [E21B 21/085](#) INV>
- D E21B 2021/007
- {Arrangements for handling drilling fluids or cuttings outside the borehole, e.g. mud boxes}
- <administratively transferred to [E21B 21/01](#) INV>
- D E21B 2021/008
- {~~Means engaging the bore entrance, e.g. hoods for collecting dust~~
- <administratively transferred to [E21B 21/015](#) INV>
- C E21B 21/01
- Arrangements for handling drilling fluids or cuttings outside the borehole, e.g. mud boxes (~~{swivel joints in hose-lines E21B 21/02;}~~ arrangements for treating drilling fluids [E21B 21/06](#) {; waste disposal systems [E21B 41/005](#)})
- WARNING**
Group E21B 21/01 is incomplete pending reclassification of documents from group E21B 21/00.
Group E21B 21/01 is also impacted by reclassification into group E21B 21/019.
Groups E21B 21/00, E21B 21/01, and E21B 21/019 should be considered in order to perform a complete search.
- N E21B 21/011
- {Dust eliminating or dust removing while drilling}
- M E21B 21/012
- {~~using exhaust air from the drilling motor for blowing off the dust at the borehole entrance~~
- WARNING**
Group E21B 21/012 is incomplete pending reclassification of documents from group E21B 21/00.

Groups [E21B 21/00](#) and [E21B 21/012](#) should be considered in order to perform a complete search.

- N E21B 21/013
 - • • {by liquids}
- N E21B 21/0135
 - • • • {Liquid flushing installations}
- N E21B 21/014
 - • • {Preventing exhaust air from the drill motor from blowing-off towards the working face}
- C E21B 21/015
 - • Means engaging the bore entrance, e.g. hoods for collecting dust

WARNING

Group [E21B 21/015](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).

Group [E21B 21/015](#) is also impacted by reclassification into group [E21B 21/019](#).

Groups [E21B 21/00](#), [E21B 21/015](#), and [E21B 21/019](#) should be considered in order to perform a complete search.

- N E21B 21/019
 - • {Arrangements for maintaining circulation of drilling fluid while connecting or disconnecting tubular joints}

WARNING

Group [E21B 21/019](#) is incomplete pending reclassification of documents from groups [E21B 21/00](#), [E21B 21/01](#), and [E21B 21/015](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M E21B 21/02
 - Swivel joints in hose-lines- ~~{(hose connections in general [F16L 31/00](#); [F16L 33/00](#))}~~

WARNING

Group [E21B 21/02](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).

Groups [E21B 21/00](#) and [E21B 21/02](#) should be considered in order to perform a complete search.

- M E21B 21/06
 - Arrangements for treating drilling fluids outside the borehole (treating steps per se, see the relevant subclasses)

WARNING

Groups [E21B 21/06](#) - [E21B 21/07](#) are incomplete pending reclassification of documents from group [E21B 21/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- D E21B 2021/061
 - • {for treating dust-loaded gaseous fluids}
 - <administratively transferred to [E21B 21/07](#) INV>

- C E21B 21/08
 - Controlling or monitoring pressure or flow of drilling fluid, e.g. automatic filling of boreholes, automatic control of bottom pressure (valve arrangements therefor [E21B 21/10](#))

WARNING

Group [E21B 21/08](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).

Group [E21B 21/08](#) is also impacted by reclassification into groups [E21B 21/082](#) and [E21B 21/085](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N E21B 21/082
- {Dual gradient systems, i.e. using two hydrostatic gradients or drilling fluid densities}
- WARNING
Group [E21B 21/082](#) is incomplete pending reclassification of documents from groups [E21B 21/00](#), [E21B 21/001](#), and [E21B 21/08](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N E21B 21/085
- {Underbalanced techniques, i.e. where borehole fluid pressure is below formation pressure}
- WARNING
Group [E21B 21/085](#) is incomplete pending reclassification of documents from groups [E21B 21/00](#) and [E21B 21/08](#).
Groups [E21B 21/00](#), [E21B 21/08](#), and [E21B 21/085](#) should be considered in order to perform a complete search.
- M E21B 21/10
- **Valves** **Valve** arrangements in drilling—fluid circulation systems (valves in general [F16K](#))
- WARNING
Groups [E21B 21/10](#) - [E21B 21/106](#) are incomplete pending reclassification of documents from group [E21B 21/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M E21B 21/12
- using drilling pipes with plural fluid passages, e.g. closed circulation systems (pipes with plural fluid passages [E21B 17/18](#))
- WARNING
Group [E21B 21/12](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).
Groups [E21B 21/00](#) and [E21B 21/12](#) should be considered in order to perform a complete search.
- M E21B 21/14
- using liquids and gases, e.g. foams
- WARNING
Group [E21B 21/14](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).
Groups [E21B 21/00](#) and [E21B 21/14](#) should be considered in order to perform a complete search.
- M E21B 21/16
- using gaseous fluids ([E21B 21/14](#) takes precedence; arrangements for handling drilling fluids outside the borehole [E21B 21/01](#); arrangements for treating drilling fluids [E21B 21/06](#))
- WARNING
Group [E21B 21/16](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).
Groups [E21B 21/00](#) and [E21B 21/16](#) should be considered in order to perform a complete search.
- M E21B 21/18
- Preventing exhaust air from the drill motor from blowing-off towards the working face
- WARNING
Group [E21B 21/18](#) is incomplete pending reclassification of documents from group [E21B 21/00](#).
Groups [E21B 21/00](#) and [E21B 21/18](#) should be considered in order to perform a complete search.

- U E21B 23/00** **Apparatus for displacing, setting, locking, releasing, or removing tools, packers or the like in the boreholes or wells (setting of casings, screens or liners [E21B 43/10](#))**
- N E21B 23/001* • {Self-propelling systems or apparatus, e.g. for moving tools within the horizontal portion of a borehole}
- D E21B 23/002* • {Tool diverters, e.g. for through-the-flow line tool systems or for wire-line tools ([E21B 23/03](#) takes precedence; for drilling [E21B 7/06](#))}
- <administratively transferred to [E21B 23/12](#)>
- D E21B 2023/008* • {Self-propelling system or apparatus, e.g. for moving tools within the horizontal portion of a borehole}
- <administratively transferred to [E21B 23/001](#) INV>
- M E21B 23/01* • for anchoring the tools or the like ([E21B 23/02](#) - [E21B 23/06](#) take precedence; anchoring of drives in the borehole [E21B 4/18](#); ~~packers [E21B 33/12](#)~~)
- C E21B 23/03* • for setting the tools into, or removing the tools from, laterally offset landing nipples or pockets
- WARNING**
Group [E21B 23/03](#) is impacted by reclassification into group [E21B 23/12](#). Groups [E21B 23/03](#) and [E21B 23/12](#) should be considered in order to perform a complete search.
- C E21B 23/04* • operated by fluid means, e.g. actuated by explosion ([E21B 23/06](#), [E21B 23/08](#) take precedence)
- WARNING**
Group [E21B 23/04](#) is impacted by reclassification into groups [E21B 23/0411](#), [E21B 23/04115](#), [E21B 23/0412](#), [E21B 23/0413](#), [E21B 23/0414](#), [E21B 23/0415](#), [E21B 23/0416](#), [E21B 23/0417](#), [E21B 23/0418](#), [E21B 23/0419](#), [E21B 23/042](#), [E21B 23/0421](#), [E21B 23/0422](#), [E21B 23/0423](#), and [E21B 34/142](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N E21B 23/0411* • • {specially adapted for anchoring tools or the like to the borehole wall or to well tube}
- WARNING**
Group [E21B 23/0411](#) is incomplete pending reclassification of documents from group [E21B 23/04](#). Groups [E21B 23/04](#) and [E21B 23/0411](#) should be considered in order to perform a complete search.
- N E21B 23/04115* • • • {using radial pistons}
- WARNING**
Group [E21B 23/04115](#) is incomplete pending reclassification of documents from group [E21B 23/04](#). Groups [E21B 23/04](#) and [E21B 23/04115](#) should be considered in order to perform a complete search.
- N E21B 23/0412* • • {characterised by pressure chambers, e.g. vacuum chambers}
- WARNING**
Group [E21B 23/0412](#) is incomplete pending reclassification of documents from group [E21B 23/04](#). Groups [E21B 23/04](#) and [E21B 23/0412](#) should be considered in order to perform a complete search.

- N E21B 23/0413
- {using means for blocking fluid flow, e.g. drop balls or darts (using balls or the like for actuating downhole valves [E21B 34/142](#))}
- WARNING
Group [E21B 23/0413](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).
Groups [E21B 23/04](#) and [E21B 23/0413](#) should be considered in order to perform a complete search.
- N E21B 23/0414
- {using explosives}
- WARNING
Group [E21B 23/0414](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).
Groups [E21B 23/04](#) and [E21B 23/0414](#) should be considered in order to perform a complete search.
- N E21B 23/0415
- {using particular fluids, e.g. electro-active liquids}
- WARNING
Group [E21B 23/0415](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).
Groups [E21B 23/04](#) and [E21B 23/0415](#) should be considered in order to perform a complete search.
- N E21B 23/0416
- {characterised by force amplification arrangements}
- WARNING
Group [E21B 23/0416](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).
Groups [E21B 23/04](#) and [E21B 23/0416](#) should be considered in order to perform a complete search.
- N E21B 23/0417
- {Down-hole non-explosive gas generating means, e.g. by chemical reaction}
- WARNING
Group [E21B 23/0417](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).
Groups [E21B 23/04](#) and [E21B 23/0417](#) should be considered in order to perform a complete search.
- N E21B 23/0418
- {specially adapted for locking the tools in landing nipples or recesses}
- WARNING
Group [E21B 23/0418](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).
Groups [E21B 23/04](#) and [E21B 23/0418](#) should be considered in order to perform a complete search.
- N E21B 23/0419
- {using down-hole motor and pump arrangements for generating hydraulic pressure}
- WARNING
Group [E21B 23/0419](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).
Groups [E21B 23/04](#) and [E21B 23/0419](#) should be considered in order to perform a complete search.
- N E21B 23/042
- {using a single piston or multiple mechanically interconnected pistons}
- WARNING
Group [E21B 23/042](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).

Groups [E21B 23/04](#) and [E21B 23/042](#) should be considered in order to perform a complete search.

N E21B 23/0421

- {using multiple hydraulically interconnected pistons}

WARNING

Group [E21B 23/0421](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).

Groups [E21B 23/04](#) and [E21B 23/0421](#) should be considered in order to perform a complete search.

N E21B 23/0422

- {characterised by radial pistons (using radial pistons for anchoring [E21B 23/04115](#))}

WARNING

Group [E21B 23/0422](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).

Groups [E21B 23/04](#) and [E21B 23/0422](#) should be considered in order to perform a complete search.

N E21B 23/0423

- {using step motors}

WARNING

Group [E21B 23/0423](#) is incomplete pending reclassification of documents from group [E21B 23/04](#).

Groups [E21B 23/04](#) and [E21B 23/0423](#) should be considered in order to perform a complete search.

M E21B 23/08

- Introducing or running tools by fluid pressure, e.g. through-the-flow-line tool systems (~~{tool diverters [E21B 23/002](#);~~ special provisions on heads therefor [E21B 33/068](#); cementing plugs [E21B 33/16](#); scrapers operated by fluid pressure [E21B 37/04](#))

U E21B 23/10

- Tools specially adapted therefor

N E21B 23/12

- Tool diverters

WARNING

Group [E21B 23/12](#) is incomplete pending reclassification of documents from group [E21B 23/03](#).

Groups [E21B 23/03](#) and [E21B 23/12](#) should be considered in order to perform a complete search.

M E21B 23/14

- for displacing a cable or cable-operated tool, e.g. for logging or perforating operations in deviated wells (~~{side entry sub [E21B 17/025](#); control line protectors [E21B 17/1035](#);~~ by fluid pressure [E21B 23/08](#); provision on well heads for introducing or removing cable-operated tools [E21B 33/072](#), [E21B 33/076](#))

C E21B 27/00

Containers for collecting or depositing substances in boreholes or wells, e.g. bailers, {baskets or buckets} for collecting mud or sand; Drill bits with means for collecting substances, e.g. valve drill bits

WARNING

Group [E21B 27/00](#) is impacted by reclassification into groups [E21B 11/04](#) and [E21B 31/08](#).

Groups [E21B 27/00](#), [E21B 11/04](#), and [E21B 31/08](#) should be considered in order to perform a complete search.

M E21B 27/04

- where the collecting or depositing means ~~including~~[include](#) helical conveying means {(drilling with helical conveying means combined with bucket-type container [E21B 7/006](#))}

Project: MP0301 (E21B)

- M E21B 28/00** Vibration generating arrangements for boreholes or wells, e.g. for stimulating production (for drilling [E21B 7/24](#); {for fishing for or freeing objects [E21B 31/005](#)};) for transmitting measuring-signals [E21B 47/14](#); for geophysical measurements [G01V 1/02](#))

WARNING

Group [E21B 28/00](#) is not complete. See also [E21B 43/003](#)

Project: RP0027 (E21B)

- U E21B 29/00** Cutting or destroying pipes, packers, plugs, or wire lines, located in boreholes or wells, e.g. cutting of damaged pipes, of windows (perforators [E21B 43/11](#)); Deforming of pipes in boreholes or wells; Reconditioning of well casings while in the ground {(by enlarging drilled holes or counterboring [E21B 7/28](#))}
- M E21B 29/02** • by explosives or by thermal or chemical means ({freeing stuck objects by explosives [E21B 31/002](#)};) destroying objects in boreholes or wells by explosives [E21B 31/16](#))
- M E21B 29/06** • Cutting windows, e.g. directional window cutters for whipstock operations ({[E21B 29/005](#) and [E21B 29/08](#) take precedence -{; whipstocks [E21B 7/061](#)})
- M E21B 29/08** • Cutting or deforming pipes to control fluid flow {(shear type blow-out preventers [E21B 33/063](#))}

- C E21B 31/00** Fishing for or freeing objects in boreholes or wells (~~{using junk baskets or the like [E21B 27/00](#)}~~; provisions on well heads for introducing or removing objects [E21B 33/068](#); locating or determining the position of objects in boreholes or wells [E21B 47/09](#))

WARNING

Group [E21B 31/00](#) is impacted by reclassification into group [E21B 31/08](#). Groups [E21B 31/00](#) and [E21B 31/08](#) should be considered in order to perform a complete search.

- M E21B 31/002** • {Destroying the objects to be fished, e.g. by explosive means -{cutting by explosives [E21B 29/02](#)}
- M E21B 31/005** • {using vibrating or oscillating means -{vibration generating arrangements for boreholes or wells [E21B 28/00](#)}
- C E21B 31/03** • Freeing by flushing -{; Controlling differential pipe sticking}

WARNING

Group [E21B 31/03](#) is impacted by reclassification into group [E21B 31/035](#). Groups [E21B 31/03](#) and [E21B 31/035](#) should be considered in order to perform a complete search.

- N E21B 31/035** • {controlling differential pipe sticking}
- WARNING
- Group [E21B 31/035](#) is incomplete pending reclassification of documents from group [E21B 31/03](#). Groups [E21B 31/03](#) and [E21B 31/035](#) should be considered in order to perform a complete search.
- U E21B 31/06** • using magnetic means
- N E21B 31/08** • using junk baskets or the like

WARNING

Group [E21B 31/08](#) is incomplete pending reclassification of documents from groups [E21B 27/00](#) and [E21B 31/00](#).

Groups [E21B 27/00](#), [E21B 31/00](#), and [E21B 31/08](#) should be considered in order to perform a complete search.

- U E21B 31/12 · Grappling tools, e.g. tongs or grabs
- M E21B 31/14 · · with means deflecting the direction of the tool, e.g. by use of knuckle joints (apparatus for deflecting the boring [{E21B 7/06}](#))

C E21B 33/00 Sealing or packing boreholes or wells

WARNING

Group [E21B 33/00](#) is impacted by reclassification into groups [E21B 2200/00](#), [E21B 2200/01](#), [E21B 2200/02](#), [E21B 2200/03](#), [E21B 2200/04](#), [E21B 2200/05](#), [E21B 2200/06](#), [E21B 2200/08](#), [E21B 2200/09](#), [E21B 2200/20](#), and [E21B 2200/22](#). All groups listed in this Warning should be considered in order to perform a complete search.

- D E21B 2033/005 · {Sealings characterised by their shape}
 <administratively transferred to [E21B 2200/01](#) ADD>
- U E21B 33/02 · Surface sealing or packing
- U E21B 33/03 · · Well heads; Setting-up thereof (valve arrangements therefor [E21B 34/02](#))
- C E21B 33/035 · · · specially adapted for underwater installations ([E21B 33/043](#), [E21B 33/064](#), [E21B 33/076](#) take precedence)

WARNING

Group [E21B 33/035](#) is impacted by reclassification into groups [E21B 33/0353](#) and [E21B 33/0387](#). Groups [E21B 33/035](#), [E21B 33/0353](#), and [E21B 33/0387](#) should be considered in order to perform a complete search.

- N E21B 33/0353 · · · {Horizontal or spool trees, i.e. without production valves in the vertical main bore}

WARNING

Group [E21B 33/0353](#) is incomplete pending reclassification of documents from groups [E21B 33/035](#), [E21B 33/0355](#), [E21B 33/037](#), [E21B 33/0375](#), [E21B 33/038](#), [E21B 33/0385](#), and [E21B 33/0422](#). All groups listed in this Warning should be considered in order to perform a complete search.

- C E21B 33/0355 · · · {Control systems, e.g. hydraulic, pneumatic, electric, acoustic, for submerged well heads}

WARNING

Group [E21B 33/0355](#) is impacted by reclassification into group [E21B 33/0353](#). Groups [E21B 33/0355](#) and [E21B 33/0353](#) should be considered in order to perform a complete search.

- C E21B 33/037 · · · Protective housings therefor

WARNING

Group [E21B 33/037](#) is impacted by reclassification into group [E21B 33/0353](#). Groups [E21B 33/037](#) and [E21B 33/0353](#) should be considered in order to perform a complete search.

- C E21B 33/0375 · · · {Corrosion protection means ~~(in general C23F)~~}

WARNING

Group [E21B 33/0375](#) is impacted by reclassification into group [E21B 33/0353](#).

Groups [E21B 33/0375](#) and [E21B 33/0353](#) should be considered in order to perform a complete search.

- C E21B 33/038 Connectors used on well heads, e.g. for connecting blow-out preventer and riser (connecting a production flow-line to an underwater well head [E21B 43/013](#))

WARNING

Group [E21B 33/038](#) is impacted by reclassification into group [E21B 33/0353](#).

Groups [E21B 33/038](#) and [E21B 33/0353](#) should be considered in order to perform a complete search.

- C E21B 33/0385 {electrical connectors ~~{underwater electrical connections in general [H01R 13/523](#)}~~}

WARNING

Group [E21B 33/0385](#) is impacted by reclassification into group [E21B 33/0353](#).

Groups [E21B 33/0385](#) and [E21B 33/0353](#) should be considered in order to perform a complete search.

- N E21B 33/0387 {Hydraulic stab connectors}

WARNING

Group [E21B 33/0387](#) is incomplete pending reclassification of documents from group [E21B 33/035](#).

Groups [E21B 33/035](#) and [E21B 33/0387](#) should be considered in order to perform a complete search.

- U E21B 33/04 Casing heads; Suspending casings or tubings in well heads (setting of casings in wells [E21B 43/10](#))

- C E21B 33/0422 {a suspended tubing or casing being gripped by a slip or an internally serrated member ~~{slips in rotary table [E21B 19/10](#)}~~}

WARNING

Group [E21B 33/0422](#) is impacted by reclassification into group [E21B 33/0353](#).

Groups [E21B 33/0422](#) and [E21B 33/0353](#) should be considered in order to perform a complete search.

- M E21B 33/06 Blow-out preventers {, i.e. apparatus closing around a drill pipe, e.g. annular blow-out preventers (rotating blow-out preventers [E21B 33/085](#); ~~valves [E21B 34/00](#)~~)}

- U E21B 33/061 {Ram-type blow-out preventers, e.g. with pivoting rams}

- U E21B 33/062 {with sliding rams}

- M E21B 33/063 {for shearing drill pipes (cutting of wireline [E21B 29/04](#); ~~cutting pipes [E21B 29/08](#)~~)}

- M E21B 33/064 specially adapted for underwater well heads (~~connectors therefor [E21B 33/038](#)~~; {control systems for submerged well-heads [E21B 33/0355](#)}; *connectors therefor [E21B 33/038](#)*)

- M E21B 33/068 having provision for introducing objects or fluids into, or removing objects from, wells (cementing heads [E21B 33/05](#); {wipers, oil savers [E21B 33/08](#)})

- U E21B 33/10 in the borehole {(sealing the junction between main bore and laterals [E21B 41/0042](#))}

- D E21B 2033/105 . . {characterised by sealing the junction between a lateral and a main bore}
<administratively transferred to [E21B 41/0042](#) INV>

- M E21B 33/12
- Packers; Plugs (~~{locking packers or plugs in landing nipples E21B 23/02}~~; used for cementing [E21B 33/134](#), [E21B 33/16](#))
- M E21B 33/128
- with a member expanded radially by axial pressure ([E21B 33/122](#), [E21B 33/124](#), {[E21B 33/129](#)} take precedence {; {characterised by the construction of the sealing means [E21B 33/1208](#)})
- M E21B 33/13
- Methods or devices for cementing, for plugging holes, crevices, or the like (dump bailers [E21B 27/02](#); ~~{methods or apparatus for grouting offshore structures E02B 17/0008}~~; chemical compositions therefor [C09K 8/00](#); [chemical compositions therefor C09K 8/00](#))
- M E21B 33/134
- Bridging plugs ~~{(packers E21B 33/12)}~~
- M E21B 33/138
- Plastering the borehole wall; Injecting into the [formations formation](#) ~~{(packers E21B 33/12; consolidation of loose sand or the like round the wells without excessively decreasing the permeability thereof E21B 43/025; compositions therefor C09K 8/56)}~~
- M E21B 33/14
- for cementing casings into boreholes ~~{(using special cement compositions C09K 8/42; control of cementation quality or level E21B 47/0005 E21B 47/005)}~~
- C E21B 33/16
- using plugs for isolating cement charge; Plugs therefor ~~{(spacer compositions C09K 8/424; stage cementing E21B 33/146; spacer compositions C09K 8/424)}~~
- WARNING**
Group [E21B 33/16](#) is impacted by reclassification into groups [E21B 33/165](#) and [E21B 33/167](#).
Groups [E21B 33/16](#), [E21B 33/165](#), and [E21B 33/167](#) should be considered in order to perform a complete search.
- N E21B 33/165
- {Cementing plugs specially adapted for being released down-hole (cementing heads [E21B 33/05](#))}
- WARNING**
Group [E21B 33/165](#) is incomplete pending reclassification of documents from group [E21B 33/16](#).
Groups [E21B 33/16](#) and [E21B 33/165](#) should be considered in order to perform a complete search.
- N E21B 33/167
- {Cementing plugs provided with anti-rotation mechanisms, e.g. for easier drill-out}
- WARNING**
Group [E21B 33/167](#) is incomplete pending reclassification of documents from group [E21B 33/16](#).
Groups [E21B 33/16](#) and [E21B 33/167](#) should be considered in order to perform a complete search.
- M E21B 34/00
- Valve arrangements for boreholes or wells (in drilling fluid circulation systems [E21B 21/10](#); ~~{tool diverters E21B 23/002}~~; blow-out preventers [E21B 33/06](#); oil flow regulating apparatus [E21B 43/12](#); valves in general [F16K](#))**
- D E21B 2034/002
- {Ball-valves}
- <administratively transferred to [E21B 2200/04](#) ADD>
- D E21B 2034/005
- {Flapper valves}
- <administratively transferred to [E21B 2200/05](#) ADD>
- D E21B 2034/007
- {Sleeve valves}
- <administratively transferred to [E21B 2200/06](#) ADD>

- C E21B 34/02
- in well heads
- WARNING**
Group [E21B 34/02](#) is impacted by reclassification into group [E21B 34/025](#). Groups [E21B 34/02](#) and [E21B 34/025](#) should be considered in order to perform a complete search.
- N E21B 34/025
- {Chokes or valves in wellheads and sub-sea wellheads for variably regulating fluid flow}
- WARNING**
Group [E21B 34/025](#) is incomplete pending reclassification of documents from groups [E21B 34/02](#), [E21B 34/04](#), and [E21B 34/045](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C E21B 34/04
- in underwater well heads
- WARNING**
Group [E21B 34/04](#) is impacted by reclassification into group [E21B 34/025](#). Groups [E21B 34/04](#) and [E21B 34/025](#) should be considered in order to perform a complete search.
- C E21B 34/045
- {adapted to be lowered on a tubular string into position within a blow-out preventer stack, e.g. so-called test trees}
- WARNING**
Group [E21B 34/045](#) is impacted by reclassification into group [E21B 34/025](#). Groups [E21B 34/045](#) and [E21B 34/025](#) should be considered in order to perform a complete search.
- U E21B 34/06
- in wells
- M E21B 34/10
- operated by control fluid supplied from ~~above-ground~~ *outside the borehole* ({by a dropped ball or piston [E21B 34/14](#) [E21B 34/142](#); } ~~above-ground-control means E21B 34/16;~~ *control means being outside the borehole E21B 34/16*)
- C E21B 34/14
- operated by movement of tools, e.g. sleeve valves operated by pistons or wire line tools {([E21B 34/066](#) takes precedence)}
- WARNING**
Group [E21B 34/14](#) is impacted by reclassification into group [E21B 34/142](#). Groups [E21B 34/14](#) and [E21B 34/142](#) should be considered in order to perform a complete search.
- N E21B 34/142
- {unsupported or free-falling elements, e.g. balls, plugs, darts or pistons}
- WARNING**
Group [E21B 34/142](#) is incomplete pending reclassification of documents from groups [E21B 23/04](#) and [E21B 34/14](#). Groups [E21B 23/04](#), [E21B 34/14](#), and [E21B 34/142](#) should be considered in order to perform a complete search.
- M E21B 34/16
- ~~Above-ground-control means therefor~~ *Control means therefor being outside the borehole* {(control systems for submerged well heads [E21B 33/0355](#))}
- U E21B 37/00
- Methods or apparatus for cleaning boreholes or wells ([E21B 21/00](#) takes precedence; {bailers [E21B 27/00](#);} cleaning pipes in general [B08B 9/02](#))**
- M E21B 37/10
- Well swabs ~~{(pistons in general F16J)}~~

- C E21B 40/00** **Tubing catchers, automatically arresting the fall of oil-well tubing**
{{preventing small objects from falling into the borehole [E21B 41/0021](#)}}
- WARNING**
*Group [E21B 40/00](#) is impacted by reclassification into group [E21B 40/001](#).
Groups [E21B 40/00](#) and [E21B 40/001](#) should be considered in order to perform a complete search.*
- N E21B 40/001** • {in the borehole (anchoring tools in the borehole [E21B 23/01](#))}
- WARNING**
Group [E21B 40/001](#) is incomplete pending reclassification of documents from group [E21B 40/00](#).
Groups [E21B 40/00](#) and [E21B 40/001](#) should be considered in order to perform a complete search.
- C E21B 41/00** **Equipment or details not covered by groups [E21B 15/00](#) - [E21B 40/00](#)**
- WARNING**
Group [E21B 41/00](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).
Group [E21B 41/00](#) is also impacted by reclassification into group [E21B 41/0099](#).
Groups [E21B 41/0092](#), [E21B 41/00](#), and [E21B 41/0099](#) should be considered in order to perform a complete search.
- D E21B 2041/0028** • {Fuzzy logic, artificial intelligence, neural networks, or the like}
<administratively transferred to [E21B 2200/22](#) ADD>
- M E21B 41/0035** • {Apparatus or methods for multilateral well technology, e.g. for the completion of or workover on wells with one or more lateral branches (~~whipstocks [E21B 7/061](#); tool diverters [E21B 23/002](#); cutting casing windows [E21B 29/06](#); specific well pattern [E21B 43/30](#)~~)}
- M E21B 41/005** • {Waste disposal systems (~~treatment of drilling fluid outside the borehole [E21B 21/06](#); collecting oil or the like from a submerged leakage [E21B 43/0122](#)~~)}
- M E21B 41/0078** • {Nozzles used in boreholes (drilling by liquid or gas jets [E21B 7/18](#); drill bits with nozzles [E21B 10/60](#); perforators using direct fluid action [E21B 43/114](#); obtaining a slurry of minerals using nozzles [E21B 43/29](#); ~~nozzles in general [B05B](#)~~)}
- M E21B 41/0085** • {Adaptations of electric power generating means for use in boreholes (~~generation of electric power per se [H02](#)~~)}
- F E21B 41/0092** • {Methods relating to program engineering, design or optimisation}
(Frozen)
- WARNING**
Group [E21B 41/0092](#) is no longer used for the classification of documents as of May 1, 2020.
The content of this group is being reclassified into groups [E21B 41/00](#), [E21B 43/00](#), [E21B 43/16](#), and [G06Q 10/06](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N E21B 41/0099** • {specially adapted for drilling for or production of natural hydrate or clathrate gas reservoirs; Drilling through or monitoring of formations containing gas hydrates or clathrates}
- WARNING**
Group [E21B 41/0099](#) is incomplete pending reclassification of documents from group [E21B 41/00](#).

Groups [E21B 41/00](#) and [E21B 41/0099](#) should be considered in order to perform a complete search.

Project: MP0301 (E21B)

- M E21B 41/08 • Underwater guide bases, e.g. drilling templates; Levelling ~~therefor~~[thereof](#)

WARNING

This group was introduced in January 2000. Patent documents are continuously being reclassified to this group from groups [E21B 7/12](#), [E21B 33/035](#), [E21B 43/017](#)

Project: RP0027 (E21B)

- M E21B 43/00 **Methods or apparatus for obtaining oil, gas, water, soluble or meltable materials or a slurry of minerals from wells (applicable only to water [E03B](#); obtaining oil-bearing deposits or soluble or meltable materials by mining techniques [E21C 41/00](#); pumps [F04](#))**

WARNING

Group [E21B 43/00](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).
Groups [E21B 41/0092](#) and [E21B 43/00](#) should be considered in order to perform a complete search.

- M E21B 43/003 • {Vibrating earth formations-~~(vibration-generating arrangements for boreholes or wells [E21B 28/00](#))~~}
- M E21B 43/006 • {Production of coal-bed methane ([E21B 43/243](#) takes precedence; ~~methods or devices for drawing-off gases for safety purposes in mines [E21F 7/00](#)~~)}
- U E21B 43/01 • specially adapted for obtaining from underwater installations (underwater well heads [E21B 33/035](#))
- D E21B 2043/0115 • • {Drilling for or production of natural gas hydrate reservoirs; -Drilling through or monitoring of formations containing gas hydrates}
<administratively transferred to [E21B 41/0099](#) INV>
- C E21B 43/017 • • Production satellite stations, i.e. underwater installations comprising a plurality of satellite well heads connected to a central station (underwater separating arrangements [E21B 43/36](#))

WARNING

Group [E21B 43/017](#) is impacted by reclassification into group [E21B 43/0175](#).
Groups [E21B 43/017](#) and [E21B 43/0175](#) should be considered in order to perform a complete search.

- N E21B 43/0175 • • • {Hydraulic schemes for production manifolds}

WARNING

Group [E21B 43/0175](#) is incomplete pending reclassification of documents from group [E21B 43/017](#).
Groups [E21B 43/017](#) and [E21B 43/0175](#) should be considered in order to perform a complete search.

- M E21B 43/02 • Subsoil filtering ([E21B 43/11](#) takes precedence; ~~chemical compositions for consolidating loose sand or the like around wells [C09K 8/56](#)~~; [chemical compositions for consolidating loose sand or the like around wells \[C09K 8/56\]\(#\)](#))
- M E21B 43/025 • • {Consolidation of loose sand or the like round the wells without excessively decreasing the permeability thereof-~~(sealing borehole walls [E21B 33/138](#))~~}
- M E21B 43/08 • • Screens or liners {(expandable screens or liners [E21B 43/108](#); ~~obtaining drinking water; filters [E03B 3/18](#)~~)}

- U E21B 43/10
 - • Setting of casings, screens, liners {or the like} in wells (driving or forcing casings into boreholes, simultaneously drilling and casing boreholes [E21B 7/20](#); setting of tools, packers or the like [E21B 23/00](#); suspending casings in well heads [E21B 33/04](#))
- U E21B 43/103
 - • • {of expandable casings, screens, liners, or the like}
- M E21B 43/108
 - • • {Expandable screens or *perforated* liners}
- U E21B 43/11
 - Perforators; Permeators
- M E21B 43/116
 - • Gun or shaped-charge perforators ~~{{projectiles with shaped or hollow charge F42B 12/10}}~~
- M E21B 43/117
 - • • Shaped-charge perforators ([E21B 43/118](#) takes precedence)
- C E21B 43/119
 - • Details, e.g. for locating perforating place or direction

WARNING
 Group [E21B 43/119](#) is impacted by reclassification into group [E21B 43/1193](#). Groups [E21B 43/119](#) and [E21B 43/1193](#) should be considered in order to perform a complete search.
- N E21B 43/1193
 - • • {Dropping perforation guns after gun actuation}

WARNING
 Group [E21B 43/1193](#) is incomplete pending reclassification of documents from group [E21B 43/119](#). Groups [E21B 43/119](#) and [E21B 43/1193](#) should be considered in order to perform a complete search.
- U E21B 43/12
 - Methods or apparatus for controlling the flow of the obtained fluid to or in wells ([E21B 43/25](#) takes precedence; valve arrangements [E21B 34/00](#))
- C E21B 43/121
 - • {Lifting well fluids (~~survey of down-hole pump systems E21B 47/0007~~ *monitoring of down-hole pump systems E21B 47/008*)}

WARNING
 Group [E21B 43/121](#) is impacted by reclassification into group [E21B 43/13](#). Groups [E21B 43/121](#) and [E21B 43/13](#) should be considered in order to perform a complete search.
- C E21B 43/122
 - • • {Gas lift}

WARNING
 Group [E21B 43/122](#) is impacted by reclassification into group [E21B 43/13](#). Groups [E21B 43/122](#) and [E21B 43/13](#) should be considered in order to perform a complete search.
- C E21B 43/123
 - • • • {Gas lift valves}

WARNING
 Group [E21B 43/123](#) is impacted by reclassification into groups [E21B 43/1235](#) and [E21B 43/13](#). Groups [E21B 43/123](#), [E21B 43/1235](#), and [E21B 43/13](#) should be considered in order to perform a complete search.
- N E21B 43/1235
 - • • • • {characterised by electromagnetic actuation}

WARNING
 Group [E21B 43/1235](#) is incomplete pending reclassification of documents from group [E21B 43/123](#). Groups [E21B 43/123](#) and [E21B 43/1235](#) should be considered in order to perform a complete search.

- C E21B 43/124 • • • {Adaptation of jet-pump systems}
- WARNING**
Group [E21B 43/124](#) is impacted by reclassification into group [E21B 43/13](#). Groups [E21B 43/124](#) and [E21B 43/13](#) should be considered in order to perform a complete search.
- D E21B 2043/125 • • • {Adaptation of walking-beam pump systems}
- <administratively transferred to [E21B 43/127](#) INV>
- C E21B 43/126 • • • {Adaptations of down-hole pump systems powered by drives outside the borehole, e.g. by a rotary or oscillating drive (powered by fluid [E21B 43/129](#))}
- WARNING**
Group [E21B 43/126](#) is impacted by reclassification into group [E21B 43/13](#). Groups [E21B 43/126](#) and [E21B 43/13](#) should be considered in order to perform a complete search.
- C E21B 43/127 • • • {Adaptations of walking-beam pump systems}
- WARNING**
Group [E21B 43/127](#) is impacted by reclassification into group [E21B 43/13](#). Groups [E21B 43/127](#) and [E21B 43/13](#) should be considered in order to perform a complete search.
- C E21B 43/128 • • • {Adaptation of pump systems with down-hole electric drives}
- WARNING**
Group [E21B 43/128](#) is impacted by reclassification into group [E21B 43/13](#). Groups [E21B 43/128](#) and [E21B 43/13](#) should be considered in order to perform a complete search.
- C E21B 43/129 • • • {Adaptations of down-hole pump systems powered by fluid supplied from outside the borehole (gas-lift [E21B 43/122](#); jet pumps [E21B 43/124](#))}
- WARNING**
Group [E21B 43/129](#) is impacted by reclassification into group [E21B 43/13](#). Groups [E21B 43/129](#) and [E21B 43/13](#) should be considered in order to perform a complete search.
- N E21B 43/13 • • • {specially adapted to dewatering of wells of gas producing reservoirs, e.g. methane producing coal beds}
- WARNING**
Group [E21B 43/13](#) is incomplete pending reclassification of documents from groups [E21B 43/121](#), [E21B 43/122](#), [E21B 43/123](#), [E21B 43/124](#), [E21B 43/126](#), [E21B 43/127](#), [E21B 43/128](#), and [E21B 43/129](#). All groups listed in this Warning should be considered in order to perform a complete search.
- T E21B 43/16 • Enhanced recovery methods for obtaining hydrocarbons (fracturing [E21B 43/26](#); obtaining slurry [E21B 43/29](#); reclamation of contaminated soil in situ [B09C](#) {}; chemical compositions therefor [C09K 8/58](#))}
- WARNING**
Group [E21B 43/16](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#). Groups [E21B 41/0092](#) and [E21B 43/16](#) should be considered in order to perform a complete search.

- U E21B 43/24 • • using heat, e.g. steam injection (heating, cooling or insulating wells [E21B 36/00](#) {; in combination with organic material [C09K 8/592](#)})
- M E21B 43/2403 • • • {by means of nuclear energy-~~(nuclear reactors G21)~~}

Project: MP0301 (E21B)

- U E21B 43/2406 • • • {Steam assisted gravity drainage [SAGD]}
 - U E21B 43/2408 • • • • {SAGD in combination with other methods}
- WARNING
Not complete pending a reorganisation. See also [E21B 43/24](#) and subgroups

Project: RP0027 (E21B)

- M E21B 43/25 • Methods for stimulating production (dump bailers [E21B 27/02](#); vibration generating arrangements [E21B 28/00](#)-{; {by vibrating earth formations [E21B 43/003](#)};} chemical compositions therefor [C09K 8/60](#))
- C E21B 43/26 • • by forming crevices or fractures {(chemical compositions therefor [C09K 8/62](#))}

WARNING

*Group [E21B 43/26](#) is impacted by reclassification into groups [E21B 43/2605](#), [E21B 43/2607](#), and [E21B 43/27](#).
All groups listed in this Warning should be considered in order to perform a complete search.*

- N E21B 43/2605 • • • {using gas or liquefied gas}
- WARNING
Group [E21B 43/2605](#) is incomplete pending reclassification of documents from group [E21B 43/26](#).
Groups [E21B 43/26](#) and [E21B 43/2605](#) should be considered in order to perform a complete search.

- N E21B 43/2607 • • • {Surface equipment specially adapted for fracturing operations}
- WARNING
Group [E21B 43/2607](#) is incomplete pending reclassification of documents from group [E21B 43/26](#).
Groups [E21B 43/26](#) and [E21B 43/2607](#) should be considered in order to perform a complete search.

- U E21B 43/263 • • • using explosives {(combustion in situ using explosives [E21B 43/248](#))}
- M E21B 43/2635 • • • • {by means of nuclear energy-~~(peaceful applications of nuclear explosive devices in general G21J 3/00)~~}
- U E21B 43/267 • • • reinforcing fractures by propping {(chemical compositions therefor [C09K 8/80](#))}
- N E21B 43/27 • • • by use of eroding chemicals, e.g. acids

WARNING

*Group [E21B 43/27](#) is incomplete pending reclassification of documents from group [E21B 43/26](#).
Groups [E21B 43/26](#) and [E21B 43/27](#) should be considered in order to perform a complete search.*

- M E21B 43/28 • Dissolving minerals other than hydrocarbons, e.g. by an alkaline or acid leaching agent ([E21B 43/241](#) takes precedence -{; using steerable or laterally extendable nozzles [E21B 43/292](#)})
- M E21B 43/281 • • {using heat-~~(heating, cooling or insulating wells E21B 36/00)~~}

- M E21B 43/32
- Preventing gas- or water-coning phenomena, i.e. the formation of a conical column of gas or water around wells
- C E21B 43/34
- Arrangements for separating materials produced by the well (separating apparatus per se, see the relevant subclasses)
- WARNING**
Group [E21B 43/34](#) is impacted by reclassification into group [E21B 43/35](#). Groups [E21B 43/34](#) and [E21B 43/35](#) should be considered in order to perform a complete search.
- N E21B 43/35
- {*specifically adapted for separating solids (down-hole drilling fluid separation systems [E21B 21/002](#); separating solids from drilling fluids [E21B 21/065](#))*}
- WARNING**
Group [E21B 43/35](#) is incomplete pending reclassification of documents from groups [E21B 43/34](#), [E21B 43/36](#), [E21B 43/38](#), [E21B 43/385](#), and [E21B 43/40](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C E21B 43/36
- Underwater separating arrangements ([E21B 43/38](#) takes precedence)
- WARNING**
Group [E21B 43/36](#) is impacted by reclassification into group [E21B 43/35](#). Groups [E21B 43/36](#) and [E21B 43/35](#) should be considered in order to perform a complete search.
- C E21B 43/38
- in the well
- WARNING**
Group [E21B 43/38](#) is impacted by reclassification into group [E21B 43/35](#). Groups [E21B 43/38](#) and [E21B 43/35](#) should be considered in order to perform a complete search.
- C E21B 43/385
- {by reinjecting the separated materials into an earth formation in the same well}
- WARNING**
Group [E21B 43/385](#) is impacted by reclassification into group [E21B 43/35](#). Groups [E21B 43/385](#) and [E21B 43/35](#) should be considered in order to perform a complete search.
- C E21B 43/40
- Separation associated with re-injection of separated materials {([E21B 43/385](#) takes precedence)}
- WARNING**
Group [E21B 43/40](#) is impacted by reclassification into group [E21B 43/35](#). Groups [E21B 43/40](#) and [E21B 43/35](#) should be considered in order to perform a complete search.

E21B 44/00 - E21B 49/00 E21B 2200/00		<u>Automatic control, surveying or testing</u>
M	E21B 44/00	Automatic control systems specially adapted for drilling operations, i.e. self-operating systems which function to carry out or modify a drilling operation without intervention of a human operator, e.g. computer-controlled drilling systems (for non-automatic drilling control, see see the operation controlled; automatic feeding from rack and connecting of drilling pipes E21B 19/20 ; controlling pressure or flow of drilling fluid E21B 21/08 ; control systems in general G05); Systems specially adapted for monitoring a plurality of drilling variables or conditions (means for transmitting measuring-signals from the well to the surface E21B 47/12)
M	E21B 44/02	• Automatic control of the tool feed ({ E21B 44/005 };, E21B 44/10 take precedence)
M	E21B 44/04	• • in response to the torque of the drive {; Measuring drilling torque (E21B 44/06 takes precedence; measuring stresses in a well bore pipe E21B 47/0006 E21B 47/007)}
M	E21B 44/10	• Arrangements for automatic stopping when the tool is lifted from the working face {(informative reference: arrangements for automatic stopping for portable percussive tools B25D 9/265)}
C	E21B 47/00	Survey of boreholes or wells (monitoring pressure or flow of drilling fluid E21B 21/08; geophysical logging G01V) <u>WARNING</u> <i>Group E21B 47/00 is impacted by reclassification into group E21B 47/006. Groups E21B 47/00 and E21B 47/006 should be considered in order to perform a complete search.</i>
D	E21B 47/0001	• {for underwater installations} <administratively transferred to E21B 47/001 >
D	E21B 47/0002	• {Survey of boreholes or wells by visual inspection (photographing internal surfaces, e.g. of pipes G03B 37/005; closed circuit television systems H04N 7/18)} <administratively transferred to E21B 47/002 >
D	E21B 47/0003	• {Determining well or borehole volumes (determining depth E21B 47/04; diameter E21B 47/08; measuring volumes in general G01F)} <administratively transferred to E21B 47/003 >
D	E21B 47/0005	• {control of cementation quality or level (measuring temperature E21B 47/065)} <administratively transferred to E21B 47/005 >
D	E21B 47/0006	• {Measuring stresses in a well bore pipe string or casing (for locating stuck pipe E21B 47/09)} <administratively transferred to E21B 47/007 >
D	E21B 47/0007	• {Survey of down-hole pump systems} <administratively transferred to E21B 47/008 >
D	E21B 47/0008	• • {Survey of walking-beam pump systems, e.g. for the detection of so called "pumped-off" conditions} <administratively transferred to E21B 47/009 >
N	E21B 47/001	• for underwater installation
Q	E21B 47/002	• by visual inspection <u>WARNING</u> <i>Group E21B 47/002 is impacted by reclassification into group E21B 47/0025.</i>

Groups [E21B 47/002](#) and [E21B 47/0025](#) should be considered in order to perform a complete search.

- N E21B 47/0025
- {generating an image of the borehole wall using down-hole measurements, e.g. acoustic or electric}

WARNING

Group [E21B 47/0025](#) is incomplete pending reclassification of documents from group [E21B 47/002](#).

Groups [E21B 47/002](#) and [E21B 47/0025](#) should be considered in order to perform a complete search.

- N E21B 47/003
- Determining well or borehole volumes (determining depth [E21B 47/04](#); diameter [E21B 47/08](#))

- N E21B 47/005
- Monitoring or checking of cementation quality or level

- N E21B 47/006
- {Detection of corrosion or deposition of substances}

WARNING

Group [E21B 47/006](#) is incomplete pending reclassification of documents from group [E21B 47/00](#).

Groups [E21B 47/00](#) and [E21B 47/006](#) should be considered in order to perform a complete search.

- N E21B 47/007
- Measuring stresses in a pipe string or casing (for locating blocked portions of pipes [E21B 47/09](#))

- N E21B 47/008
- Monitoring of down-hole pump systems, e.g. for the detection of "pumped-off" conditions

- N E21B 47/009
- • Monitoring of walking-beam pump systems

- C E21B 47/01
- Devices for supporting measuring instruments on ~~a drill pipe, rod or wireline~~ [drill bits, pipes, rods or wirelines](#) ~~{setting or locking tools in boreholes or wells E21B 23/00}; {(flexible centering means per se E21B 17/1014)}~~ Protecting measuring instruments in boreholes against heat, shock, pressure or the like

NOTE

Devices for both supporting and protecting measuring instruments are only classified in ~~E21B 47/011~~ [E21B 47/017](#)

WARNING

Group [E21B 47/01](#) is impacted by reclassification into group [E21B 47/013](#).

Groups [E21B 47/01](#) and [E21B 47/013](#) should be considered in order to perform a complete search.

- D E21B 47/011
- {Protecting measuring instruments (cooling or insulating arrangements for boreholes or wells E21B 36/00)}

<administratively transferred to [E21B 47/017](#)>

- N E21B 47/013
- • Devices specially adapted for supporting measuring instruments on drill bits

WARNING

Group [E21B 47/013](#) is incomplete pending reclassification of documents from groups [E21B 47/01](#) and [E21B 47/017](#).

Groups [E21B 47/01](#), [E21B 47/017](#), and [E21B 47/013](#) should be considered in order to perform a complete search.

- Q E21B 47/017
- • Protecting measuring instruments

WARNING

Group [E21B 47/017](#) is impacted by reclassification into groups [E21B 47/013](#) and [E21B 47/0175](#).

Groups [E21B 47/017](#), [E21B 47/013](#), and [E21B 47/0175](#) should be considered in order to perform a complete search.

- N E21B 47/0175
- • • {Cooling arrangements}
- WARNING
Group [E21B 47/0175](#) is incomplete pending reclassification of documents from group [E21B 47/017](#).
Groups [E21B 47/017](#) and [E21B 47/0175](#) should be considered in order to perform a complete search.
- M E21B 47/02
- Determining slope or direction ~~{clinometers or direction meters G01C}~~
- M E21B 47/022
- • of the borehole ~~{, e.g. using geomagnetism}~~
- D E21B 47/02208
- • • {using seismic or acoustic means}
- <administratively transferred to [E21B 47/0224](#)>
- D E21B 47/02216
- • • {using at least one source of electromagnetic energy and at least one detector therefor}
- <administratively transferred to [E21B 47/0228](#)>
- D E21B 47/02224
- • • • {at least one of the sources or one of the detectors being located above ground}
- <administratively transferred to [E21B 47/0232](#)>
- D E21B 47/02232
- • • {using a pendulum}
- <administratively transferred to [E21B 47/0236](#)>
- N E21B 47/0224
- • • using seismic or acoustic means
- N E21B 47/0228
- • • using electromagnetic energy or detectors therefor
- N E21B 47/0232
- • • • at least one of the energy sources or one of the detectors being located on or above the ground surface
- N E21B 47/0236
- • • using a pendulum
- M E21B 47/026
- • of penetrated ground layers ~~{apparatus for obtaining oriented cores E21B 25/16; formation testing E21B 49/00}~~
- M E21B 47/04
- Measuring depth or liquid level ~~{measuring liquid level in general {and telerecorders for level of liquids} G01F; {measuring depth in general G01B 7/26}}~~
- D E21B 47/042
- • {Measuring or locating liquid level (E21B 47/044 takes precedence)}
- <administratively transferred to [E21B 47/047](#)>
- D E21B 47/044
- • {using radioactive markers}
- <administratively transferred to [E21B 47/053](#)>
- N E21B 47/047
- • Liquid level ([E21B 47/053](#) takes precedence)
- N E21B 47/053
- • using radioactive markers
- M E21B 47/06
- Measuring temperature or pressure ~~{measuring temperature in general G01K; measuring pressure in general G01L {telerecorders for pressure G01L; telerecorders for temperature G01K}}~~
- D E21B 47/065
- • {Measuring temperature}
- <administratively transferred to [E21B 47/07](#)>
- N E21B 47/07
- • Temperature
- M E21B 47/08
- Measuring ~~the diameter~~ *diameters or related dimensions at the borehole* ~~{measuring diameter in general G01B}~~
- D E21B 47/082
- • {using radiant means, e.g. acoustic, radioactive, electromagnetic}
- <administratively transferred to [E21B 47/085](#)>

- N E21B 47/085 • • *using radiant means, e.g. acoustic, radioactive or electromagnetic*
- M E21B 47/09 • Locating or determining the position of objects in boreholes or wells, ~~{~~ {, e.g. the position of an extending arm}; Identifying the free or blocked portions of pipes ~~(measuring depth E21B 47/04; measuring diameter E21B 47/08)~~
- D E21B 47/0905 • • ~~{by detecting magnetic anomalies (investigating materials by investigating magnetic variables G01N 27/72)}~~
 <administratively transferred to [E21B 47/092](#)>
- D E21B 47/091 • • ~~{by detecting an acoustic anomaly, e.g. a mud-pressure pulse}~~
 <administratively transferred to [E21B 47/095](#)>
- D E21B 47/0915 • • ~~{using impression packers, e.g. to detect recesses or perforations}~~
 <administratively transferred to [E21B 47/098](#)>
- N E21B 47/092 • • *by detecting magnetic anomalies*
- N E21B 47/095 • • *by detecting an acoustic anomalies, e.g. using mud-pressure pulses*
- N E21B 47/098 • • *using impression packers, e.g. to detect recesses or perforations*
- C E21B 47/10 • Locating fluid leaks, intrusions or movements {(using impression packers [E21B 47/0915](#) [E21B 47/098](#); flow measurement in general G01F; examining density and leaking in general G01M)}

WARNING

Group [E21B 47/10](#) is impacted by reclassification into groups [E21B 47/113](#) and [E21B 47/114](#).

Groups [E21B 47/10](#), [E21B 47/113](#), and [E21B 47/114](#) should be considered in order to perform a complete search.

- D E21B 47/1005 • • ~~{using thermal measurements (measurement temperature E21B 47/065)}~~
 <administratively transferred to [E21B 47/103](#)>
- D E21B 47/101 • • ~~{using acoustic energy}~~
 <administratively transferred to [E21B 47/107](#)>
- D E21B 47/1015 • • ~~{using tracers: using radioactivity}~~
 <administratively transferred to [E21B 47/11](#)>
- D E21B 47/102 • • ~~{using electrical indications: using light radiations}~~
 <administratively transferred to [E21B 47/113](#)>
- D E21B 47/1025 • • ~~{Detecting leaks, e.g. of tubing, by pressure testing (investigating fluid-tightness of structures by using fluid or vacuum G01M 3/02)}~~
 <administratively transferred to [E21B 47/117](#)>
- N E21B 47/103 • • *using thermal measurements {(measurement temperature [E21B 47/07](#))}*
- N E21B 47/107 • • *using acoustic means*
- Q E21B 47/11 • • *using tracers; using radioactivity*

WARNING

Group [E21B 47/11](#) is impacted by reclassification into group [E21B 47/111](#).

Groups [E21B 47/11](#) and [E21B 47/111](#) should be considered in order to perform a complete search.

- N E21B 47/111 • • • {using radioactivity}

WARNING

Group [E21B 47/111](#) is incomplete pending reclassification of documents from group [E21B 47/11](#).

Groups [E21B 47/11](#) and [E21B 47/111](#) should be considered in order to perform a complete search.

- Q E21B 47/113
- • using electrical indications; using light radiations
- WARNING
 Group [E21B 47/113](#) is incomplete pending reclassification of documents from group [E21B 47/10](#).
 Group [E21B 47/113](#) is also impacted by reclassification into group [E21B 47/114](#).
 Groups [E21B 47/10](#), [E21B 47/113](#), and [E21B 47/114](#) should be considered in order to perform a complete search.
- N E21B 47/114
- • • {using light radiation}
- WARNING
 Group [E21B 47/114](#) is incomplete pending reclassification of documents from groups [E21B 47/10](#) and [E21B 47/113](#).
 Groups [E21B 47/10](#), [E21B 47/113](#), and [E21B 47/114](#) should be considered in order to perform a complete search.
- N E21B 47/117
- • Detecting leaks, e.g. from tubing, by pressure testing
- C E21B 47/12
- Means for transmitting measuring-signals {or control signals} from the well to the surface-~~{, or from the surface to the well}~~, e.g. for logging while drilling (~~remote signalling in general G08~~)
- WARNING
 Group [E21B 47/12](#) is impacted by reclassification into group [E21B 47/138](#).
 Groups [E21B 47/12](#) and [E21B 47/138](#) should be considered in order to perform a complete search.
- D E21B 47/121
- • {using earth as an electrical conductor (E21B 47/122 takes precedence; in general H04B 13/02; electric prospecting G01V 3/00)}
- <administratively transferred to [E21B 47/125](#)>
- D E21B 47/122
- • {by electromagnetic energy, e.g. radio frequency (in general H04B; magnetic prospecting G01V 3/00)}
- <administratively transferred to [E21B 47/13](#)>
- D E21B 47/123
- • • {using light waves (optical transmission in general H04B 10/00; light guides, e.g. optical fibres G02B 6/00)}
- <administratively transferred to [E21B 47/135](#)>
- D E21B 47/124
- • {Storing data down-hole, e.g. in a memory or on a record carrier (recording in connection with measuring in general G01D; information storage in general G11)}
- <administratively transferred to [E21B 47/26](#)>
- N E21B 47/125
- • using earth as an electrical conductor ([E21B 47/13](#) takes precedence)
- N E21B 47/13
- • by electromagnetic energy, e.g. radio frequency
- N E21B 47/135
- • • using light waves, e.g. infrared or ultraviolet waves
- N E21B 47/138
- • {Devices entrained in the flow of well-bore fluid for transmitting data, control or actuation signals}
- WARNING
 Group [E21B 47/138](#) is incomplete pending reclassification of documents from group [E21B 47/12](#).
 Groups [E21B 47/12](#) and [E21B 47/138](#) should be considered in order to perform a complete search.
- U E21B 47/14
- • using acoustic waves
- U E21B 47/18
- • • through the well fluid {, e.g. mud pressure pulse telemetry}

- D E21B 47/182 . . . {by continuous mud waves with modulation of the waves}
<administratively transferred to [E21B 47/20](#)>
- D E21B 47/185 . . . {by negative mud pulses using a pressure relieve valve between drill pipe and annulus}
<administratively transferred to [E21B 47/22](#)>
- D E21B 47/187 . . . {by positive mud pulses using a flow restricting valve within the drill pipe}
<administratively transferred to [E21B 47/24](#)>
- N E21B 47/20 . . . by modulation of mud waves, e.g. by continuous modulation
- N E21B 47/22 . . . by negative mud pulses using a pressure relieve valve between drill pipe and annulus
- N E21B 47/24 . . . by positive mud pulses using a flow restricting valve within the drill pipe
- N E21B 47/26 . Storing data down-hole, e.g. in a memory or on a record carrier
- U E21B 49/00 Testing the nature of borehole walls; Formation testing; Methods or apparatus for obtaining samples of soil or well fluids, specially adapted to earth drilling or wells (sampling in general [G01N 1/00](#))**
- M E21B 49/005 . {Testing the nature of borehole walls or the formation by using drilling mud or cutting data ~~(investigating chemical or physical properties of materials per se [G01N](#))~~}
- M E21B 49/006 . {Measuring wall stresses in the borehole ~~(investigation of mechanical properties of foundation soil [E02D 1/022](#))~~}
- M E21B 49/008 . {by injection test; by analysing pressure variations in an injection or production test, e.g. for estimating the skin factor (measuring pressure [E21B 47/06](#); ~~obtaining fluid samples or testing fluids [E21B 49/08](#)~~)}
- U E21B 49/02 . by mechanically taking samples of the soil (apparatus for obtaining undisturbed cores [E21B 25/00](#); investigation of foundation soil in situ [E02D 1/00](#))
- M E21B 49/025 . . {of underwater soil, e.g. with grab devices ~~(underwater coring [E21B 25/18](#))~~}
- M E21B 49/04 . . using explosives in boreholes; using projectiles penetrating the wall ~~{(drilling by use of explosives [E21B 7/007](#); gun or shaped charge perforators [E21B 43/116](#))}~~
- M E21B 49/06 . . ~~with~~ **using** side-wall drilling tools {pressing} or scrapers
- M E21B 49/08 . Obtaining fluid samples or testing fluids, in boreholes or wells ~~{(packers [E21B 33/12](#); valves [E21B 34/00](#); analysing pressure variations in an injection or production test [E21B 49/008](#))}~~
- C E21B 49/081 . . {with down-hole means for trapping a fluid sample ([E21B 49/10](#) takes precedence)}
- WARNING**
*Group [E21B 49/081](#) is impacted by reclassification into groups [E21B 49/0813](#) and [E21B 49/0815](#).
Groups [E21B 49/081](#), [E21B 49/0813](#), and [E21B 49/0815](#) should be considered in order to perform a complete search.*
- N E21B 49/0813 . . . {Sampling valve actuated by annulus pressure changes}
- WARNING**
*Group [E21B 49/0813](#) is incomplete pending reclassification of documents from groups [E21B 49/081](#) and [E21B 49/083](#).
Groups [E21B 49/081](#), [E21B 49/083](#), and [E21B 49/0813](#) should be considered in order to perform a complete search.*

- N E21B 49/0815
- • {Sampling valve actuated by tubing pressure changes}
- WARNING
Group [E21B 49/0815](#) is incomplete pending reclassification of documents from groups [E21B 49/081](#) and [E21B 49/083](#).
Groups [E21B 49/081](#), [E21B 49/083](#), and [E21B 49/0815](#) should be considered in order to perform a complete search.
- C E21B 49/083
- • {Samplers adapted to be lowered into or retrieved from a landing nipple, e.g. for testing a well without removing the drill string}
- WARNING
Group [E21B 49/083](#) is impacted by reclassification into groups [E21B 49/0813](#) and [E21B 49/0815](#).
Groups [E21B 49/083](#), [E21B 49/0813](#), and [E21B 49/0815](#) should be considered in order to perform a complete search.
- D E21B 2049/085
- {Determining specific physical fluid parameters}
- <administratively transferred to [E21B 49/0875](#) INV>
- C E21B 49/087
- {Well testing, e.g. testing for reservoir productivity or formation parameters}
- WARNING
Group [E21B 49/087](#) is impacted by reclassification into group [E21B 49/0875](#).
Groups [E21B 49/087](#) and [E21B 49/0875](#) should be considered in order to perform a complete search.
- N E21B 49/0875
- • {determining specific fluid parameters}
- WARNING
Group [E21B 49/0875](#) is incomplete pending reclassification of documents from group [E21B 49/087](#).
Groups [E21B 49/087](#) and [E21B 49/0875](#) should be considered in order to perform a complete search.
- U E21B 49/10
- • using side-wall fluid samplers or testers
- N E21B 2200/00**
- Special features related to earth drilling for obtaining oil, gas or water**
- WARNING
Group [E21B 2200/00](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/00](#) should be considered in order to perform a complete search.
- N E21B 2200/01
- Sealings characterised by their shape
- WARNING
Group [E21B 2200/01](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/01](#) should be considered in order to perform a complete search.
- N E21B 2200/02
- Down-hole chokes or valves for variably regulating fluid flow
- WARNING
Group [E21B 2200/02](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/02](#) should be considered in order to perform a complete search.

- N E21B 2200/03
- Valves operated by gear mechanisms, e.g. rack and pinion mechanisms
- WARNING
Group [E21B 2200/03](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/03](#) should be considered in order to perform a complete search.
- N E21B 2200/04
- Ball valves
- WARNING
Group [E21B 2200/04](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/04](#) should be considered in order to perform a complete search.
- N E21B 2200/05
- Flapper valves
- WARNING
Group [E21B 2200/05](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/05](#) should be considered in order to perform a complete search.
- N E21B 2200/06
- Sleeve valves
- WARNING
Group [E21B 2200/06](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/06](#) should be considered in order to perform a complete search.
- N E21B 2200/08
- Down-hole devices using materials which decompose under well-bore conditions
- WARNING
Group [E21B 2200/08](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/08](#) should be considered in order to perform a complete search.
- N E21B 2200/09
- Detecting, eliminating, preventing liquid slugs in production pipes
- WARNING
Group [E21B 2200/09](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/09](#) should be considered in order to perform a complete search.
- N E21B 2200/20
- Computer models or simulations, e.g. for reservoirs under production, drill bits
- WARNING
Group [E21B 2200/20](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).
Groups [E21B 33/00](#) and [E21B 2200/20](#) should be considered in order to perform a complete search.
- N E21B 2200/22
- Fuzzy logic, artificial intelligence, neural networks or the like
- WARNING
Group [E21B 2200/22](#) is incomplete pending reclassification of documents from group [E21B 33/00](#).

Groups [E21B 33/00](#) and [E21B 2200/22](#) should be considered in order to perform a complete search.

Project: RP0027 (E21C)

- | | | |
|---|---------------------------|---|
| D | E21C 1/00 -
E21C 3/00 | <u>Drilling machines</u> |
| D | E21C 1/00 | {Rotary-drilling machines (rotary-drilling machines in general B23B; rotary earth drilling E21B 3/00; driving of shafts, galleries or tunnels E21D not used, see subgroup and E21B 3/00)}

<administratively transferred to E21B 3/00 > |
| D | E21C 1/10 | <ul style="list-style-type: none"> • {with a built-in feeding device (feeding devices E21C 5/00)} <administratively transferred to E21B 19/08 > |
| D | E21C 3/00 | {Drilling machines with reciprocating tool that is intermittently turned when out of contact with the working face (portable percussion tools in general B25D)}

<administratively transferred to E21B 1/00 > |
| D | E21C 3/02 | <ul style="list-style-type: none"> • {Machines in which the tool is connected to an impulse member} <administratively transferred to E21B 1/36 > |
| D | E21C 3/04 | <ul style="list-style-type: none"> • {Hammer drilling machines in which the tool is hit by an impulse member} <administratively transferred to E21B 1/38 > |
| D | E21C 3/06 | <ul style="list-style-type: none"> • {Means for driving the impulse member} <administratively transferred to E21B 1/12 > |
| D | E21C 3/16 | <ul style="list-style-type: none"> • • {by electromagnets} <administratively transferred to E21B 1/22 > |
| D | E21C 3/18 | <ul style="list-style-type: none"> • • {directly by a piston of an internal combustion engine} <administratively transferred to E21B 1/34 > |
| D | E21C 3/24 | <ul style="list-style-type: none"> • • {directly by air, steam, or gas pressure} <administratively transferred to E21B 1/30 > |
| D | E21C 3/26 | <ul style="list-style-type: none"> • • • {working with pulses} <administratively transferred to E21B 1/32 > |
| D | E21C 5/00 -
E21C 11/00 | <u>Details of drilling apparatus</u> |
| D | E21C 5/00 | {Devices for feeding tool to working face (feeding devices for metal-boring machines B23B not used, see subgroups and E21B 19/08)}

<administratively transferred to E21B 19/08 > |
| D | E21C 5/08 | <ul style="list-style-type: none"> • {Means for driving feed mechanism (not used, see subgroups and E21B 19/08)} <administratively transferred to E21B 19/08 > |
| D | E21C 5/10 | <ul style="list-style-type: none"> • • {Separate motor, e.g. compressed-air motor or cylinder} <administratively transferred to E21B 19/08 > |
| D | E21C 7/00 | {Dust eliminating or dust removing while drilling (see also E21B 21/00; equipment for preventing the formation of dust by slitting or dislodging machines E21C 35/22; by foam E21B 21/14; exhausting dust from mines E21F 5/20)}

<administratively transferred to E21B 21/011 > |

- D E21C 7/04
 - {~~using exhaust air from the drill motor for blowing-off the dust~~
 - <administratively transferred to [E21B 21/012](#)>
- D E21C 7/08
 - {~~by liquids~~
 - <administratively transferred to [E21B 21/013](#)>
- D E21C 7/10
 - • {~~Liquid flushing installations~~
 - <administratively transferred to [E21B 21/0135](#)>
- D E21C 7/12
 - {~~Preventing exhaust air from the drill motor from blowing-off towards the working face~~
 - <administratively transferred to [E21B 21/014](#)>
- D E21C 11/00
 - {~~Supports or guides for drilling machines; Columns to which the machine is clamped (slitting machines mounted on supports E21C 25/64; guiding, slitting, or dislodging machines E21C 35/08; feed legs E21B 19/087)~~}**
 - <administratively transferred to [E21B 15/006](#)>

Project: RP0029 (E21C)

- U E21C 35/00
 - Miscellaneous items relating to machines for slitting or completely freeing the mineral from the seam**
- U E21C 35/18
 - Mining picks; Holders therefor (planing knives [E21C 27/44](#) {; pick-like bits for milling stone like materials [B28D 1/186](#)})
- D E21C 2035/1803
 - • {~~Inserts or layers of wear-resistant material~~
 - <administratively transferred to [E21C 35/183](#) INV>
- D E21C 2035/1806
 - • • {~~Fixing methods or devices~~
 - <administratively transferred to [E21C 35/1831](#) INV>
- D E21C 2035/1809
 - • • {~~Multiple inserts~~
 - <administratively transferred to [E21C 35/1833](#) INV>
- D E21C 2035/1813
 - • • {~~Chemical composition or specific material~~
 - <administratively transferred to [E21C 35/1835](#) INV>
- D E21C 2035/1816
 - • • {~~characterised by the shape~~
 - <administratively transferred to [E21C 35/1837](#) INV>
- D E21C 2035/182
 - • {~~Reversible picks, i.e. having two working ends, one operating, the other in reserve~~
 - <administratively transferred to [E21C 35/184](#) INV>
- D E21C 2035/1823
 - • {~~using a locking piston actuated hydraulically, e.g. by spraying fluid pressure~~
 - <administratively transferred to [E21C 35/186](#) INV>
- D E21C 2035/1826
 - • {~~characterised by adaptations to use an extraction tool~~
 - <administratively transferred to [E21C 35/188](#) INV>
- T E21C 35/183
 - • with inserts or layers of wear-resistant material {(drill bits with wear-resistant parts [E21B 10/46](#))}
- N E21C 35/1831
 - • • {*Fixing methods or devices*}
- N E21C 35/1833
 - • • {*Multiple inserts*}
- N E21C 35/1835
 - • • {*Chemical composition or specific material*}
- N E21C 35/1837
 - • • {*characterised by the shape*}
- N E21C 35/184
 - • {*Reversible picks, i.e. having two working ends, one operating, the other in reserve*}
- N E21C 35/186
 - • {*using a locking piston actuated hydraulically, e.g. by spraying fluid pressure*}

- U E21C 35/187
 - • with arrangement of fluid-spraying nozzles (supply of fluid to the nozzles [E21C 35/22](#))
- N E21C 35/188
 - • {characterised by adaptations to use an extraction tool}
- U E21C 35/19
 - • Means for fixing picks or holders
- D E21C 2035/191
 - • • {for fixing holders}
 - <administratively transferred to [E21C 35/191](#) INV>
- N E21C 35/191
 - • • {for fixing holders}

Project: RP0027 (E21C)

- E21C 35/22
 - Equipment for preventing the formation of, or for removal of, dust (~~removing dust while drilling E21C 7/00~~; picks with arrangement of fluid-spraying nozzles [E21C 35/187](#); {removing dust while drilling [E21B 21/011](#)})

Project: RP0029 (E21C)

- U E21C 35/223
 - • {Equipment associated with mining machines for sucking dust-laden air from the cutting area, with or without cleaning of the air}
- D E21C 2035/226
 - • {Control valves for the spraying liquid used in dust suppression systems}
 - <administratively transferred to [E21C 35/226](#) INV>
- N E21C 35/226
 - • {Control valves for the spraying liquid used in dust suppression systems}
- M E21C 41/00

Methods of underground or surface mining ([E21C 45/00](#) takes precedence); Layouts therefor (for peat [E21C 49/00](#))

WARNING

Groups [E21C 41/28](#) – [E21C 41/14](#) are no longer used for classification. Documents are reclassified to groups [E21C 41/16](#), [E21C 41/26](#) and [E21C 41/32](#)

Group [E21C 41/00](#) is incomplete pending reclassification of documents from groups [E21C 41/04](#), [E21C 41/10](#) and [E21C 41/14](#).

All the groups listed in this warning should be considered in order to perform a complete search.

- F E21C 41/04
(Frozen)
 - {for hard coal}

WARNING
Group [E21C 41/04](#) is no longer used for the classification of documents as of May 1, 2020.
The content of this group is being reclassified into groups [E21C 41/00](#), [E21C 41/16](#) - [E21C 41/32](#).
All the groups listed in this warning should be considered in order to perform a complete search.
- F E21C 41/10
(Frozen)
 - {for oil-bearing deposits}

WARNING
Group [E21C 41/10](#) is no longer used for the classification of documents as of May 1, 2020.
The content of this group is being reclassified into groups [E21C 41/00](#), [E21C 41/16](#) - [E21C 41/32](#).
All the groups listed in this warning should be considered in order to perform a complete search.
- F E21C 41/14
(Frozen)
 - {for other specified minerals, e.g. gold, mercury, other heavy metals, sulfur, slate; for clay}

WARNING
Group [E21C 41/14](#) is no longer used for the classification of documents as of May 1, 2020.

*The content of this group is being reclassified into groups [E21C 41/00](#), [E21C 41/16](#) - [E21C 41/32](#).
All the groups listed in this warning should be considered in order to perform a complete search.*

- M E21C 41/16
- Methods of underground mining (winning machines therefor [E21C 25/00](#) - [E21C 39/00](#)); Layouts therefor
- WARNING
- Group Groups [E21C 41/16](#) is - incomplete [E21C 41/24](#) are incomplete pending reclassification of documents from groups [E21C 41/04](#), [E21C 41/10](#) and [E21C 41/14](#). See Warning after*
All the groups listed [E21C 41/00](#) in this warning should be considered in order to perform a complete search.
- M E21C 41/26
- Methods of surface mining (machines for obtaining, or the removal of, materials in open-pit mines [E21C 47/00](#)); Layouts therefor
- WARNING
- Group Groups [E21C 41/26](#) is - incomplete [E21C 41/31](#) are incomplete pending reclassification of documents from groups [E21C 41/04](#), [E21C 41/10](#) and [E21C 41/14](#). See Warning after*
All the groups listed [E21C 41/00](#) in this warning should be considered in order to perform a complete search.
- M E21C 41/32
- Reclamation of surface-mined areas (machines or methods for treating or working soil for agricultural purposes [A01B 77/00](#), [A01B 79/00](#); machines for back-filling [E02F 5/22](#))
- WARNING
- Group [E21C 41/32](#) is incomplete pending reclassification of documents from group groups [E21C 41/04](#), see other [E21C 41/10](#) groups of and [E21C 41/14](#). All the groups listed [E21C 41/00](#) in this warning should be considered in order to perform a complete search.*

Project: RP0027 (E21C)

- D E21C 43/00
- ~~{Methods for preparing for the gasification of coal underground (methods for generating gas C10B)}~~
- <administratively transferred to [E21B 43/295](#)>

Project: MP0301 (E21D)

- U E21D 23/00
- Mine roof supports for step- by- step movement, e.g. in combination with provisions for shifting of conveyors, mining machines, or guides therefor ({transport of mine roof support units [E21F 13/008](#); } shifting of mine conveyors at the working face [E21F 13/08](#))
- U E21D 23/04
- Structural features of the supporting construction, e.g. linking members between adjacent frames or sets of props; Means for counteracting lateral sliding on inclined floor ([E21D 23/14](#) takes precedence)
- M E21D 23/0481
- {Supports specially adapted for use in combination with the placing of filling-up materials (placing filling-up materials in underground workings per se [E21F 15/00](#))}
- WARNING
- Group E21D-23/0481 is not complete. See also other groups of E21D-23/00*

Project: RP0027 (E21F)

- U E21F 5/00** Means or methods for preventing, binding, depositing, or removing dust {(in combination with mining machines [E21C 35/22](#))}; Preventing explosions or fires (dams [E21F 17/103](#); applying liquids or other fluent materials to surfaces in general [B05](#))
- E21F 5/20 • Drawing-off or depositing dust (~~dust-removing while drilling~~ [E21C 7/00](#); ~~{dust-removing while drilling~~ [E21B 21/011](#)}; while slitting [E21C 35/22](#))

Project: RP0658 (F01L)

- D F01L 2101/00** ~~Using particular materials~~
<administratively transferred to [F01L 2301/00](#) ADD>
- D F01L 2101/02** • ~~Using ceramic materials~~
<administratively transferred to [F01L 2301/02](#) ADD>
- D F01L 2103/00** ~~Manufacturing of components used in valve arrangements~~
<administratively transferred to [F01L 2303/00](#) ADD>
- D F01L 2103/01** • ~~Tools for producing, mounting or adjusting, e.g. some part of the distribution~~
<administratively transferred to [F01L 2303/01](#) ADD>
- D F01L 2103/02** • ~~Initial camshaft settings~~
<administratively transferred to [F01L 2303/02](#) ADD>
- D F01L 2105/00** ~~Valve arrangements comprising rollers~~
<administratively transferred to [F01L 2305/00](#) ADD>
- D F01L 2105/02** • ~~Mounting of rollers~~
<administratively transferred to [F01L 2305/02](#) ADD>
- D F01L 2107/00** ~~Preventing the rotation of tappets~~
<administratively transferred to [F01L 2307/00](#) ADD>
- D F01L 2109/00** ~~Self-contained lash adjusters~~
<administratively transferred to [F01L 2309/00](#) ADD>
- D F01L 2111/00** ~~Differential gears located between crankshafts and camshafts for varying the timing of valves~~
<administratively transferred to [F01L 2311/00](#) ADD>
- D F01L 2113/00** ~~Rotary valve drives~~
<administratively transferred to [F01L 2313/00](#) ADD>
- U F01L 2250/00** **Camshaft drives characterised by their transmission means**
- U F01L 2250/06** • the camshaft being driven by gear wheels
- N F01L 2301/00** **Using particular materials**
- N F01L 2301/02** • *Using ceramic materials*
- N F01L 2303/00** **Manufacturing of components used in valve arrangements**
- N F01L 2303/01** • *Tools for producing, mounting or adjusting, e.g. some part of the distribution*
- N F01L 2303/02** • *Initial camshaft settings*
- N F01L 2305/00** **Valve arrangements comprising rollers**
- N F01L 2305/02** • *Mounting of rollers*

- N F01L 2307/00** *Preventing the rotation of tappets*
- N F01L 2309/00** *Self-contained lash adjusters*
- N F01L 2311/00** *Differential gears located between crankshafts and camshafts for varying the timing of valves*
- N F01L 2313/00** *Rotary valve drives*

Project: MP0301 (F15B)

- U F15B 1/00** **Installations or systems with accumulators; Supply reservoir or sump assemblies**
- U F15B 1/02 • Installations or systems with accumulators
- U F15B 1/027 • • having accumulator charging devices
- M F15B 1/0275 • • • {with two or more pilot valves, e.g. for independent setting of the cut-in and cut-out pressures}

WARNING

Not complete, see F15B 1/027

Project: MP0468 (F15B)

- U F15B 11/00** **Servomotor systems without provision for follow-up action; {Circuits therefor}(F15B 3/00 takes precedence)**
- M F15B 11/16 • ~~With~~*with* two or more servomotors

Project: MP0301 (F15B)

- U F15B 15/00** **Fluid-actuated devices for displacing a member from one position to another; Gearing associated therewith**
- U F15B 15/08 • Characterised by the construction of the motor unit
- M F15B 15/088 • • {the motor using combined actuation, e.g. electric and fluid actuation}

WARNING

Not complete, see also F15B 15/08, F15B 2015/206

Project: MP0468 (F15B)

- U F15B 21/00** **Common features of fluid actuator systems; Fluid-pressure actuator systems or details thereof, not covered by any other group of this subclass**
- U F15B 21/04 • Special measures taken in connection with the properties of the fluid
- M F15B 21/041 • • {Removal or measurement of solid or liquid contamination, e.g. filtering}
- M F15B 21/042 • • {Controlling the temperature of the fluid}

WARNINGGroup [F15B 21/042](#) is impacted by reclassification into groups [F15B 21/0423](#) and [F15B 21/0427](#).Groups [F15B 21/042](#), [F15B 21/0423](#), and [F15B 21/0427](#) should be considered in order to perform a complete search.

- M F15B 21/0423 • • • ~~{Cooling}~~*Cooling*

WARNINGGroup [F15B 21/0423](#) is incomplete pending reclassification of documents from group [F15B 21/042](#).

Groups [F15B 21/042](#) and [F15B 21/0423](#) should be considered in order to perform a complete search.

- M F15B 21/0427
- • • ~~{Heating}~~ *Heating*
- WARNING
- Group [F15B 21/0427](#) is incomplete pending reclassification of documents from group [F15B 21/042](#).
- Groups [F15B 21/042](#) and [F15B 21/0427](#) should be considered in order to perform a complete search.
- M F15B 21/044
- • ~~{Removal or measurement of undissolved gas, e.g. de-aeration, venting or bleeding}~~
- M F15B 21/045
- • ~~{Compensating for variations in viscosity or temperature}~~
- M F15B 21/047
- • ~~{Preventing foaming, churning or cavitation}~~
- M F15B 21/048
- • ~~{Arrangements for compressed air preparation, e.g. comprising air driers, air condensers, filters, lubricators or pressure regulators}~~

Project: RP0481 (F16F)

- U F16F 7/00
- Vibration-dampers; Shock-absorbers (using fluid [F16F 5/00](#), [F16F 9/00](#); specific for rotary systems [F16F 15/10](#) {; belt tensioners [F16H 7/12](#)))**
- F16F 7/10
- using inertia effect ([F16F 13/108](#), [F16F 13/22](#), [F16F 15/10](#), [F16F 15/22](#) take precedence; stabilising vehicle bodies by means of movable masses [B62D 37/04](#); ~~protection of buildings against vibrations or shocks by mass dampers [E04B 1/985](#)~~; *protection of buildings against vibrations or shocks by mass dampers [E04H 9/0215](#)*; arrangements or devices for damping mechanical oscillations of power lines [H02G 7/14](#))

Project: RP0478 (F16H)

- U F16H 19/00
- Gearings comprising essentially only toothed gears or friction members and not capable of conveying indefinitely-continuing rotary motion (with intermittently-driving members [F16H 27/00](#) - [F16H 31/00](#); rope or like tackle for lifting or haulage [B66D 3/00](#))**
- U F16H 19/02
- for interconverting rotary {or oscillating} motion and reciprocating motion
- U F16H 19/06
- • comprising {flexible members, e.g. an} endless flexible member
- WARNING
- Groups [F16H 19/0604](#) - [F16H 19/0672](#) are not complete pending reclassification; see also this group
- M F16H 2019/0609
- • • {the reciprocating motion being created by ~~drums with different diameters~~ *at least one drum or pulley with different diameters*, using a differential effect}
- U F16H 19/0622
- • • {for converting reciprocating movement into oscillating movement and *vice versa*, the reciprocating movement is perpendicular to the axis of oscillation}
- D F16H 2019/0627
- • • • {the flexible member, e.g. a cable, being wound with one string to a drum and unwound with other string from the same or an other drum to create reciprocating movement of the flexible member}
- <administratively transferred to [F16H 19/0628](#) INV>
- N F16H 19/0628
- • • • {the flexible member, e.g. a cable, being wound with one string to a drum and unwound with the other string to create reciprocating movement of the flexible member}

D	F16H 19/0631	<ul style="list-style-type: none"> • • {the flexible member, e.g. a cable, being wound with one string to a drum and unwound with other string from the same or an other drum to create reciprocating movement of the flexible member} <p><administratively transferred to F16H 19/0628></p>
M	F16H 19/0645	<ul style="list-style-type: none"> • • {using guided flexible members <i>the flexible push or pull member having guiding means</i>, i.e. the flexible member being supported at least partially by a guide to transmit the reciprocating movement (<i>non-buckling chains F16H 19/0636</i>)}
M	F16H 19/0654	<ul style="list-style-type: none"> • • {using twisting movement of flexible members to shorten the axial length <i>modify the axial length of the mechanism</i>}
M	F16H 2019/0668	<ul style="list-style-type: none"> • • {Both ends of the flexible member are fixed to the casing <i>with open loop, e.g. with the free ends of the flexible member fixed to the casing, e.g. when the drive means are arranged on the carriage</i>}
M	F16H 2019/0681	<ul style="list-style-type: none"> • • {characterised by an endless flexible member, i.e. the flexible member forming a closed loop}
M	F16H 2019/0686	<ul style="list-style-type: none"> • • • {the flexible member being directly driven, e.g. by a pulley, and the reciprocating member forming a part of the loop, i.e. a part of the endless flexible member <i>by a pulley or chain wheel</i>}
U	F16H 25/00	Gearings comprising primarily only cams, cam-followers and screw-and-nut mechanisms
U	F16H 25/04	<ul style="list-style-type: none"> • for conveying rotary motion
U	F16H 25/06	<ul style="list-style-type: none"> • • with intermediate members guided along tracks on both rotary members
M	F16H 2025/063	<ul style="list-style-type: none"> • • • {the intermediate members, e.g. balls, engaging cams on opposite coaxial <i>being balls engaging on opposite cam</i> discs}
U	F16H 25/18	<ul style="list-style-type: none"> • for conveying or interconverting oscillating or reciprocating motions
U	F16H 25/20	<ul style="list-style-type: none"> • • Screw mechanisms (with automatic reversal F16H 25/12)
M	F16H 25/2015	<ul style="list-style-type: none"> • • • {Elements <i>Means</i> specially adapted for stopping actuators in the end position; Position sensing means}
M	F16H 2025/2028	<ul style="list-style-type: none"> • • • {specially adapted for converting reciprocating motion into rotary motion, e.g. by using screw profile with high efficiency <i>using screw profiles with high efficiency for converting reciprocating motion into oscillating movement</i>}
M	F16H 2025/2053	<ul style="list-style-type: none"> • • • {Screws in parallel arrangement driven simultaneously with an output member moved by both <i>the</i> screws}
M	F16H 2025/2059	<ul style="list-style-type: none"> • • • {Superposing movement by two coaxial screws, e.g. with opposite thread direction (telescopic screws with three screw members F16H 25/2056)}
U	F16H 2025/2062	<ul style="list-style-type: none"> • • • {Arrangements for driving the actuator}
U	F16H 2025/2075	<ul style="list-style-type: none"> • • • • {Coaxial drive motors}
M	F16H 2025/2078	<ul style="list-style-type: none"> • • • • {the rotor being integrated with the nut <i>or screw</i> body}
U	F16H 25/24	<ul style="list-style-type: none"> • • • Elements essential to such mechanisms, e.g. screws, nuts (F16H 25/22 takes precedence)
M	F16H 2025/2445	<ul style="list-style-type: none"> • • • • {Supports <i>or other means</i> for compensating misalignment or offset between screw and nut}
U	F16H 48/00	Differential gearings (cooling or lubricating of differential gearing F16H 57/04)
		NOTE
		When classifying in this main group, in the absence of an indication to the contrary, classification is made in all appropriate places.
U	F16H 48/06	<ul style="list-style-type: none"> • with gears having orbital motion
U	F16H 48/10	<ul style="list-style-type: none"> • • with orbital spur gears

- D F16H 2048/108
- • • {characterised by intermeshing orbital gears, i.e. at least two intermeshing orbital gears}
 - <administratively transferred to [F16H 48/11](#) INV>
- U F16H 55/00 Elements with teeth or friction surfaces for conveying motion; Worms; Pulleys; Sheaves (pulley-blocks [B66D 3/04](#))**
- U F16H 55/02
- Toothed members; Worms
- M F16H 55/17
- • Toothed wheels (~~{with simple tooth shapes F16H 55/10}~~; worm wheels [F16H 55/22](#); chain wheels [F16H 55/30](#))
- M F16H 55/18
- • • Special devices for taking up backlash ~~{(in tuner actuating devices H03J, H03J 1/06; in gear-train of clocks or watches G04B 35/00 for gears having orbital motion F16H 1/2863)}~~
- U F16H 57/00 General details of gearing (of screw-and-nut gearing [F16H 25/00](#); of fluid gearing [F16H 39/00](#) - [F16H 43/00](#))**
- U F16H 57/02
- Gearboxes; Mounting gearing therein
- NOTE**
When classifying in this group, in the absence of an indication to the contrary, classification is made in all appropriate subgroups.
- M F16H 57/02004
- • {the gears being positioned relative to one another by rolling members or by specially adapted surfaces on the gears, *e.g. by a rolling surface with the diameter of the pitch circle*}
- U F16H 57/04
- Features relating to lubrication or cooling {or heating}{(in hydrokinetic gearing [F16H 41/30](#); } control of lubrication or cooling in hydrostatic gearing [F16H 61/4165](#))}
- M F16H 57/0408
- • {Exchange, *draining* or filling of transmission lubricant ~~(filling or draining lubricant of or from machines or engines F01M 11/04; servicing, maintaining, repairing, or refitting of vehicles B60S 5/00)~~}
- U F16H 57/0434
- • {relating to lubrication supply, e.g. pumps (arrangement of pumps [F16H 57/0441](#); Pressure control (grooves with pumping effect for supplying lubricant [F16H 57/0428](#); generation and variation of line pressure for transmission control [F16H 61/0021](#))}
- U F16H 57/0436
- • • {Pumps}
- M F16H 57/0439
- • • • {~~Pumps with different power sources~~*using multiple pumps with different power sources or a single pump with different power sources*, e.g. one and the same pump may selectively *be* driven by either the engine or an electric motor}
- M F16H 57/0458
- • {Oil-mist or spray lubrication; Means to reduce foam formation (~~lubrication by injection F16H 57/0456; venting F16H 57/027~~*reducing foam formation by venting F16H 57/027*)}
- U F16H 59/00 Control inputs to {control units of} change-speed-, or reversing-gearings for conveying rotary motion**
- U F16H 59/02
- Selector apparatus
- NOTE**
Selection apparatus of general applicability or of interest apart from its use in control of gearings conveying rotary motion is also classified in subclass [G05G](#)
- M F16H 2059/0239
- • {Up- and down-shift *or range or mode* selection by repeated movement (mechanical step by step selection devices [F16H 63/14](#))}

U	F16H 61/00	Control functions within {control units of} change-speed- or reversing-gearings for conveying rotary motion {; Control of exclusively fluid gearing, friction gearing, gearings with endless flexible members or other particular types of gearing}
U	F16H 61/0003	• {Arrangement or mounting of elements of the control apparatus, e.g. valve assemblies or snapfittings of valves; Arrangements of the control unit on or in the transmission gearbox}
M	F16H 61/0006	• • { Special features of electronic control units <i>Electronic control units for transmission control, e.g. connectors, casings or circuit boards</i> }
M	F16H 61/0009	• • { Special features of hydraulic control units, e.g. <i>Hydraulic control units for transmission control, e.g. assembly of</i> valve plates or valve units}
U	F16H 61/04	• Smoothing ratio shift
M	F16H 2061/0455	• • {during shifts involving three or more friction <i>shift</i> members, e.g. release of 3-4 clutch, 2-4 brake and apply of forward clutch C1 (swap-shift F16H 2061/0451) }
M	F16H 2061/047	• • {by preventing or solving a tooth but <i>butt</i> situation upon engagement failure due to misalignment of teeth}
M	F16H 2061/0474	• • {by smoothing engagement <i>or release</i> of positive clutches; Methods or means for shock free engagement of dog clutches (for tooth-but situations F16H 2061/047 <i>for tooth butt situations F16H 2061/047)</i> }
U	F16H 61/22	• Locking {of the control input devices} (<i>F16H 63/34</i> takes precedence {; vehicle fittings for preventing unauthorised use, e.g. ignition keys interlocked with gear box or gear lever <i>B60R 25/06</i> })
M	F16H 2061/223	• • {Electrical gear shift lock, <i>i.e.e.g.</i> locking of lever in park or neutral position by electric means if brake is not applied; Key interlock, i.e. locking the key if lever is not in park position}
U	F16H 61/26	• Generation or transmission of movements for final actuating mechanisms
		NOTES
		1. The generation or transmission of movements comprising only the selector apparatus, is classified in group <i>F16H 59/00</i> .
		2. The generation or transmission of movements, when part of the final output mechanisms, is classified in group <i>F16H 63/00</i> .
U	F16H 61/28	• • with at least one movement of the final actuating mechanism being caused by a non-mechanical force, e.g. power-assisted
M	F16H 61/2807	• • • {using electric control signals <i>for shift actuators</i> , e.g. electro-hydraulic control <i>therefor</i> (<i>F16H 61/30</i> , <i>F16H 61/32</i> take precedence; methods for generating shift signals <i>F16H 61/0213</i>)}
U	F16H 61/30	• • • Hydraulic {or pneumatic} motors {or related fluid control means} therefor
M	F16H 2061/307	• • • {Actuators with three <i>or more</i> defined positions, <i>i.e.e.g.</i> three position servos}

Project: MP0439 (F21H)

M	F21H	INCANDESCENT MANTLES; OTHER INCANDESCENT BODIES HEATED BY COMBUSTION
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WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0301 (F21K)**M F21K 9/00****Light sources using semiconductor devices as light-generating elements, e.g. using light-emitting diodes [LED] or lasers**NOTES

1. In this group, the following expressions are used with the meaning indicated:
 - "light source" means a light-generating component intended for installation in a fitting or holder incorporated in a lighting device;
 - "retrofit light source" means a light source comprising substantially the same attachment means as those of incandescent lamps or fluorescent lamps. "Retrofit light sources" are specially adapted for replacing or substituting such lamps.
2. Semiconductor devices per se, or assemblies thereof, specially adapted for light emission, e.g. for use in light sources (in the sense of Note (1)) are covered by subclass [H01L](#), e.g. [H01L 33/00](#) or [H01L 51/50](#), or by subclass [H01S](#).
3. Lighting devices or systems in which light sources are used are covered by subclasses [F21L](#) or [F21S](#).
4. When classifying in this group, classification is also made in subclass [F21V](#) if detail aspects covered by that subclass are of interest.

WARNING

~~1. Group F21K 9/00 is incomplete pending reclassification of documents from groups F21K 99/00, F21V 19/042, F21V 19/045, F21S 2/00. All groups listed in this Warning should be considered in order to perform a complete search.~~

~~2.~~ **1.** Group [F21K 9/00](#) is impacted by reclassification into groups [F21K 9/20](#), [F21K 9/23](#), [F21K 9/232](#), [F21K 9/233](#), [F21K 9/235](#), [F21K 9/237](#), [F21K 9/238](#), [F21K 9/27](#), [F21K 9/272](#), [F21K 9/275](#), [F21K 9/278](#), [F21K 9/60](#), [F21K 9/61](#), [F21K 9/62](#), [F21K 9/64](#), [F21K 9/65](#), [F21K 9/66](#), [F21K 9/68](#), [F21K 9/69](#), [F21K 9/90](#) and [F21K 99/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0439 (F21L)**M F21L****LIGHTING DEVICES OR SYSTEMS THEREOF, BEING PORTABLE OR SPECIALLY ADAPTED FOR TRANSPORTATION**NOTES

1. This subclass covers devices or systems designed or specially adapted to be carried, e.g. by hand, or otherwise transported from place to place, e.g. on wheeled supports, in order to provide illumination as and where required.
2. This subclass does not cover devices or systems intended for fixed installation, e.g. vehicle lighting, or for use essentially at a permanent location, which are covered by subclass [F21S](#).
3. Non-electric lighting devices are classified in groups [F21L 17/00-F21L 26/00](#) only if a special adaptation related to the use of a non-electric light source is of interest.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (F21S)**M F21S****NON-PORTABLE LIGHTING DEVICES; SYSTEMS THEREOF; VEHICLE LIGHTING DEVICES SPECIALLY ADAPTED FOR VEHICLE EXTERIORS**NOTES1. This subclass covers:

- devices or systems intended for fixed installation or for use at a permanent location, e.g. free-standing floor- or table-lamps.
- aspects related to the optical, mechanical, thermal or electrical arrangement of elements in vehicle illuminating devices specially adapted for vehicle exterior, e.g. headlamps.
- aspects related to the optical, mechanical, thermal or electrical arrangement of elements in vehicle light signalling devices specially adapted for vehicle exterior, e.g. brake lamps or direction indicator lights.

2. This subclass does not cover:

- devices or systems specially adapted for transportation, which are covered by subclass [F21L](#).
- aspects related to the vehicles in which lighting devices are arranged, e.g. the arrangement or operation of lighting devices on vehicles, which are covered by [B60Q](#).
- control of vehicle lighting devices in relation to the vehicle as a whole, e.g. for levelling, swivelling or aiming. Such arrangements are covered by group [B60Q 1/06](#), even if the movement of the lighting device occurs inside the lamp housing.

3. Non-electric lighting devices or systems are classified in groups [F21S 11/00](#) - [F21S 15/00](#) only if a special adaptation related to the use of a non-electric light source is of interest.

4. In this subclass, it is desirable to add the indexing codes of subclasses [F21W](#) and [F21Y](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (F21V)**M F21V****FUNCTIONAL FEATURES OR DETAILS OF LIGHTING DEVICES OR SYSTEMS THEREOF; STRUCTURAL COMBINATIONS OF LIGHTING DEVICES WITH OTHER ARTICLES, NOT OTHERWISE PROVIDED FOR**NOTES

1. Groups [F21V 1/00-F21V 14/00](#) cover aspects related to light emission or distribution. Groups [F21V 15/00-F21V 31/00](#) cover aspects not related to light emission or distribution.

2. Details of non-electric lighting devices or systems are classified in groups [F21V 35/00-F21V 37/00](#) only if a special adaptation related to the use of a non-electric light source is of interest.

3. In this subclass, it is desirable to add the indexing codes of subclasses [F21W](#) and [F21Y](#).

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[F21V 8/00](#) covered by [G02B 6/00](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (F23B)**M F23B**

METHODS OR APPARATUS FOR COMBUSTION USING ONLY SOLID FUEL (for combustion of fuels that are solid at room temperatures, but burned in melted form, e.g. candle wax, [C11C 5/00](#), [F23C](#), [F23D](#); using solid fuel suspended in air [F23C](#), [F23D 1/00](#); using solid fuel suspended in liquids [F23C](#), [F23D 11/00](#); using solid fuel and fluent fuel simultaneously or alternately [F23C](#), [F23D 17/00](#); burning of low grade fuel [F23G](#); grates [F23H](#); feeding solid fuel to combustion apparatus [F23K](#); combustion chambers, not otherwise provided for [F23M](#); domestic apparatus [F24](#); central heating boilers [F24D](#); package boilers [F24H](#))

NOTES

1. This subclass only covers combustion wherein the main body of fuel is either essentially stationary during combustion or mechanically transported, as opposed to pneumatically transported or suspended in air, during combustion.
2. In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.
3. In this subclass, methods are classified in the groups that cover the apparatus used. Methods that are not related to a particular type of apparatus are classified in group [F23B 90/00](#).
4. In this subclass, it is desirable to add the indexing codes of groups [F23B 2101/00](#) - [F23B 2900/00](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0679 (F23K)**U F23K 2300/00****Pretreatment and supply of liquid fuel***N F23K 2300/10*

• Pretreatment

N F23K 2300/101

• • Application of magnetism or electricity

N F23K 2300/103

• • Mixing with other fluids

N F23K 2300/20

• Supply line arrangements

N F23K 2300/201

• • Pumps

N F23K 2300/202

• • Filtering

N F23K 2300/203

• • Purging

N F23K 2300/204

• • Preheating

N F23K 2300/205

• • Vaporising

N F23K 2300/206

• • Control devices

D F23K 2301/10

• Pretreatment

<administratively transferred to [F23K 2300/10](#) ADD>*D F23K 2301/101*

• • Application of magnetism or electricity

<administratively transferred to [F23K 2300/101](#) ADD>*D F23K 2301/103*

• • Mixing with other fluids

<administratively transferred to [F23K 2300/103](#) ADD>*D F23K 2301/20*

• Supply line arrangements

<administratively transferred to [F23K 2300/20](#) ADD>

- D F23K 2301/201
 - • Pumps
 - <administratively transferred to [F23K 2300/201](#) ADD>
- D F23K 2301/202
 - • Filtering
 - <administratively transferred to [F23K 2300/202](#) ADD>
- D F23K 2301/203
 - • Purging
 - <administratively transferred to [F23K 2300/203](#) ADD>
- D F23K 2301/204
 - • Preheating
 - <administratively transferred to [F23K 2300/204](#) ADD>
- D F23K 2301/205
 - • Vaporising
 - <administratively transferred to [F23K 2300/205](#) ADD>
- D F23K 2301/206
 - • Control devices
 - <administratively transferred to [F23K 2300/206](#) ADD>

U F23K 2400/00 Pretreatment and supply of gaseous fuel

- N F23K 2400/10
 - Pretreatment
- N F23K 2400/20
 - Supply line arrangements
- N F23K 2400/201
 - • Control devices
- D F23K 2401/10
 - Pretreatment
 - <administratively transferred to [F23K 2400/10](#) ADD>
- D F23K 2401/20
 - Supply line arrangements
 - <administratively transferred to [F23K 2400/20](#) ADD>
- D F23K 2401/201
 - • Control devices
 - <administratively transferred to [F23K 2400/201](#) ADD>

Project: MP0301 (F24C)

U F24C 7/00 Stoves or ranges heated by electrical energy (electric heating elements or arrangements [H05B](#))

- U F24C 7/04
 - with heat radiated directly from the heating element ([F24C 7/10](#) takes precedence)
- M F24C 7/046
 - • {Ranges}

WARNING

Group F24C 7/046 is not complete, pending reorganisation. See also [F24C 7/04](#)

- U F24C 7/06
 - Arrangement or mounting of electric heating elements
- M F24C 7/067
 - • {on ranges}

WARNING

Group F24C 7/067 is not complete, pending reorganisation. See also [F24C 7/06](#)

- U F24C 7/08
 - Arrangement or mounting of control or safety devices (switches [H01H](#); circuit arrangements for electric heating [H05B](#))
- U F24C 7/082
 - • {on ranges, e.g. control panels, illumination}
- M F24C 7/083
 - • • {on tops, hot plates}

WARNING

Groups F24C 7/083, F24C 7/085, F24C 7/086 are not complete, pending reclassification. See also [F24C 7/082](#)

Project: RP0438-F (F41B)

- U F41B 11/00 Compressed-gas guns, e.g. air guns; Steam guns**
- U F41B 11/50** • Magazines for compressed-gas guns; Arrangements for feeding or loading projectiles from magazines
- M F41B 11/57** • • Electronic or electric systems for feeding or loading ([F41B 11/53](#) takes precedence)

WARNING

Group F41B-11/57 is impacted by reclassification into group F41B-11/71. Groups F41B-11/57 and F41B-11/71 should be considered in order to perform a complete search.

- U F41B 11/70** • Details not provided for in [F41B 11/50](#) or [F41B 11/60](#)
- M F41B 11/71** • • Electric or electronic control systems, e.g. for safety purposes

WARNING

Group F41B-11/71 is incomplete pending reclassification of documents from group F41B-11/57. Groups F41B-11/57 and F41B-11/71 should be considered in order to perform a complete search.

Project: MP0430 (G01N)

- M G01N INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (~~separating components of materials in general B01D, B01J, B03, B07; apparatus fully provided for in a single other subclass, see the relevant subclass, e.g. B01L; measuring or testing processes other than immunoassay, involving enzymes or microorganisms C12M, C12Q~~; ~~investigation of foundation soil in situ E02D 1/00; sensing humidity changes for compensating measurements of other variables or for compensating readings of instruments for variations in humidity, see G01D or the relevant subclass for the variable measured; testing or determining the properties of structures G01M; measuring or investigating electric or magnetic properties of materials G01R; systems or methods in general, using reception or emission of radiowaves or other waves and based on propagation effects, e.g. Doppler effect, propagation time, direction of propagation, G01S; determining sensivity, graininess, or density of photographic materials G03C 5/02; testing component parts of nuclear reactors G21C 17/00; testing electrographic developer properties G03G 15/0848~~; ~~controlling or regulating non-electric variables G05D; measuring degree of ionisation of ionised gases, i.e. plasma H05H 1/0006~~; ~~testing electrographic developer properties G03G 15/0848~~)**

NOTES

1. In this subclass, the following terms are used with the meanings indicated :
 - "investigating" means testing or determining;
 - "materials" includes solid, liquid or gaseous media, e.g. the atmosphere.
2. Attention is drawn to the Notes following the title of class [G01](#).
3. Inventions relating to investigating the properties of materials, specially adapted for use in processes covered by subclass [B23K](#), are classified in group [B23K 31/12](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- U G01N 1/00 Sampling; Preparing specimens for investigation**

- M G01N 1/02
- Devices for withdrawing samples ~~{{(for medical or veterinary purposes A61; {sampling of foundation soil E02D 1/04}; obtaining samples of soil or well fluids E21B 49/00; {collecting or conveying radioactive samples G01T 7/00, e.g. G01T 7/02, G01T 7/08}}}~~
- M G01N 3/00**
- Investigating strength properties of solid materials by application of mechanical stress ~~(strain gauges G01B; measuring stress in general G01L)~~**
- NOTE
- This group covers the stressing of materials not only below but also beyond the elastic limit, e.g. until breaking occurs.
- U G01N 3/02
- Details
- M G01N 3/06
- • Special adaptations of indicating or recording means ~~(indicating or recording means for measuring in general G01D)~~
- U G01N 3/08
- by applying steady tensile or compressive forces (G01N 3/28 takes precedence)
- U G01N 3/10
- • generated by pneumatic or hydraulic pressure (G01N 3/18 takes precedence)
- M G01N 3/12
- • • Pressure testing ~~(testing fluid-tightness G01M 3/00)~~
- M G01N 3/32
- by applying repeated or pulsating forces ~~(generation of such forces in general; see the relevant classes or subclasses, e.g. B06, G10)~~
- M G01N 9/00**
- Investigating density or specific gravity of materials; Analysing materials by determining density or specific gravity ~~(weighing apparatus G01G)~~**
- U G01N 15/00**
- Investigating characteristics of particles; Investigating permeability, pore-volume, or surface-area of porous materials (identification of microorganisms C12Q)**
- M G01N 15/02
- Investigating particle size or size distribution (G01N 15/04, G01N 15/10 take precedence; by measuring osmotic pressure G01N 7/10; ~~by filtering B01D; by sifting B07B~~)
- U G01N 19/00**
- Investigating materials by mechanical methods (G01N 3/00 - G01N 17/00 take precedence)**
- M G01N 19/08
- Detecting presence of flaws or irregularities ~~(measuring roughness or irregularity of surfaces G01B 5/28)~~
- U G01N 21/00**
- Investigating or analysing materials by the use of optical means, i.e. using infra-red, visible or ultra-violet light (G01N 3/00-G01N 19/00 take precedence)**
- NOTE
- This group does not cover the investigation of spectral properties of light per se, or measurements of the properties of materials where spectral properties of light are sensed and primary emphasis is placed on creating, detecting or analysing the spectrum providing that the properties of the materials to be investigated are of minor importance. Those subjects are covered by group G01J 3/00.
- U G01N 21/01
- Arrangements or apparatus for facilitating the optical investigation
- U G01N 21/03
- • Cuvette constructions
- M G01N 21/07
- • • Centrifugal type cuvettes (G01N 21/09 takes precedence; ~~centrifuges per se B04B~~)
- U G01N 21/17
- Systems in which incident light is modified in accordance with the properties of the material investigated (where the material investigated is optically excited causing a change in wavelength of the incident light G01N 21/63)
- U G01N 21/47
- • Scattering, i.e. diffuse reflection (G01N 21/25, G01N 21/41 take precedence {G01N 21/55 takes precedence})

- U G01N 21/49
 - • • within a body or fluid
- M G01N 21/51
 - • • • inside a container, e.g. in an ampoule ([G01N 21/53](#) takes precedence; ~~checking containers for cleanliness B08B 9/46~~)
- M G01N 21/53
 - • • • within a flowing fluid, e.g. smoke (~~alarm devices actuated by smoke G08B 17/10~~)
- U G01N 21/62
 - Systems in which the material investigated is excited whereby it emits light or causes a change in wavelength of the incident light
- U G01N 21/66
 - • electrically excited, e.g. electroluminescence
- M G01N 21/67
 - • • using electric arcs or discharges (~~spark gaps per se H01T~~)
- M G01N 24/00**

Investigating or analyzing materials by the use of nuclear magnetic resonance, electron paramagnetic resonance or other spin effects (~~arrangements or instruments for measuring magnetic resonance effects G01R 33/20~~)
- U G01N 25/00**

Investigating or analyzing materials by the use of thermal means ([G01N 3/00](#) - [G01N 23/00](#) take precedence)
- M G01N 25/72
 - Investigating presence of flaws (~~by investigating thermal conductivity G01N 25/18~~)
- U G01N 27/00**

Investigating or analysing materials by the use of electric, electro-chemical, or magnetic means ([G01N 3/00](#) - [G01N 25/00](#) take precedence; measurement or testing electric or magnetic variables or of electric or magnetic properties of materials [G01R](#))
- U G01N 27/02
 - by investigating the impedance of the material
- U G01N 27/04
 - • by investigating resistance {(for measuring the amount of particles [G01N 15/0656](#))}
- M G01N 27/06
 - • • of a liquid (involving electrolysis [G01N 27/26](#); ~~involving polarography G01N 27/48; measuring electric resistance of fluids G01R 27/22~~)
- U G01N 27/08
 - • • • which is flowing continuously
- M G01N 27/10
 - • • • Investigation or analysis specially adapted for controlling or monitoring operations or for signalling (~~regulating G05D~~)
- M G01N 27/26
 - by investigating electrochemical variables; by using electrolysis or electrophoresis (~~investigating resistance to corrosion G01N 17/00; investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography, G01N 30/00; immunoelectrophoresis G01N 33/561; electrochemical processes or apparatus in general B01J; standard cells H01M 6/28~~)
- M G01N 27/60
 - by investigating electrostatic variables {, e.g. electrographic flaw testing (~~{[G01N 27/007](#) takes precedence } ; by investigating capacitance G01N 27/22~~)}
- M G01N 27/92
 - by investigating breakdown voltage ([G01N 27/60](#), [G01N 27/62](#) take precedence; ~~testing of articles or specimens of solids or fluids for dielectric strength or breakdown voltage G01R 31/12~~)

M G01N 29/00 Investigating or analysing materials by the use of ultrasonic, sonic or infrasonic waves; Visualisation of the interior of objects by transmitting ultrasonic or sonic waves through the object ([G01N 3/00](#)-, [G01N 5/00](#), [G01N 7/00](#), [G01N 9/00](#), [G01N 11/00](#), [G01N 13/00](#), [G01N 15/00](#), [G01N 17/00](#), [G01N 19/00](#), [G01N 21/00](#), [G01N 22/00](#), [G01N 23/00](#), [G01N 24/00](#), [G01N 25/00](#), [G01N 27/00](#) take precedence; ~~measuring or indicating of ultrasonic, sonic or infrasonic waves in general G01H; systems using the reflection or reradiation of acoustic waves, e.g. acoustic imaging, G01S 15/00; obtaining records by techniques analogous to photography using ultrasonic, sonic or infrasonic waves G03B 42/06; {medical diagnosis by ultrasounds A61B 8/00; generating or transmitting mechanical or acoustic waves B06B, G10K; seismic or acoustic prospecting or detecting G01V 1/00}~~)

M G01N 30/00 Investigating or analysing materials by separation into components using adsorption, absorption or similar phenomena or using ion-exchange, e.g. chromatography {~~or field flow fractionation~~} ([G01N 3/00](#)-, [G01N 5/00](#), [G01N 7/00](#), [G01N 9/00](#), [G01N 11/00](#), [G01N 13/00](#), [G01N 15/00](#), [G01N 17/00](#), [G01N 19/00](#), [G01N 21/00](#), [G01N 22/00](#), [G01N 23/00](#), [G01N 24/00](#), [G01N 25/00](#), [G01N 27/00](#), [G01N 29/00](#) take precedence; ~~separation for the preparation or production of components B01D 15/00, B01D 53/02, B01D 53/14; solid sorbent compositions in general B01J 20/00; ion-exchange in general B01J 39/00 - B01J 49/00~~){~~or field flow fractionation (for preparation or production of components B01D 21/00, B01D 43/00, B01D 45/00 or B03C)~~}

NOTE

In this group, the following term is used with the meaning indicated:

- "conditioning" refers to the adjustment or control of environmental parameters, e.g. temperature or pressure.

Project: N/A (G01N)

U G01N 30/02 • Column chromatography

U G01N 30/62 • • Detectors specially adapted therefor

U G01N 30/72 • • • Mass spectrometers {(mass spectrometers per se [H01J 49/00](#))}

G01N 30/7233 • • • • {interfaced to liquid or ~~superfluid~~[supercritical fluid](#) chromatograph (interfaces in general for introducing or extracting samples to be analysed with specially adapted mass spectrometer, see [H01J 49/04](#))}

Project: MP0430 (G01N)

M G01N 30/88 • • Integrated analysis systems specially adapted therefor, not covered by a single one of the groups [G01N 30/04](#) - [G01N 30/86](#) (~~signal analysis systems per se G06F, G06G~~)

M G01N 31/00 Investigating or analysing non-biological materials by the use of the chemical methods specified in the subgroup (~~testing the effectiveness or completeness of sterilisation procedures without using enzymes or microorganisms A61L 2/28; measuring or testing processes involving enzymes or microorganisms C12Q 1/00~~); Apparatus specially adapted for such methods

U G01N 31/16 • using titration

M G01N 31/18 • • Burettes specially adapted for titration (~~burettes in general B01L 3/02~~)

U G01N 33/00 Investigating or analysing materials by specific methods not covered by groups [G01N 1/00](#) - [G01N 31/00](#)

- U G01N 33/48
 - Biological material, e.g. blood, urine ([G01N 33/02](#), [G01N 33/26](#), [G01N 33/44](#), [G01N 33/46](#) take precedence); Haemocytometers (counting blood corpuscles distributed over a surface by scanning the surface [G06M 11/02](#))
- U G01N 33/50
 - • Chemical analysis of biological material, e.g. blood, urine; Testing involving biospecific ligand binding methods; Immunological testing (measuring or testing processes involving enzymes or microorganisms, compositions or test papers therefor; processes for forming such compositions, condition responsive control in microbiological or enzymological processes [C12Q](#))

NOTES

1. In this group, the following expression is used with the meaning indicated: "involving", when used in relation to a material, includes the testing for the material as well as employing the material as a determinant or reactant in a test for a different material.
2. In groups [G01N 33/52](#) – [G01N 33/98](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
3. Documents relating to new peptides or new DNA or its corresponding mRNA, encoding for the peptides, and their use in measuring or testing processes are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their use in diagnostics. However, if the investigating or analysing aspects are of interest, the documents are classified in this group.

- M G01N 33/58
 - • involving labelled substances ([G01N 33/53](#) takes precedence; ~~for testing in vivo A61K 49/00~~)
- M G01N 33/60
 - • • involving radioactive labelled substances (~~tracers G21H 5/02~~)

Project: RP0247 (G01S)

- C G01S 5/00
 - Position-fixing by co-ordinating two or more direction or position line determinations; Position-fixing by co-ordinating two or more distance determinations {(using active systems [G01S 13/00](#), [G01S 15/00](#), [G01S 17/00](#))}

WARNING

Group [G01S 5/00](#) is impacted by reclassification into groups [G01S 5/01](#), [G01S 5/011](#), [G01S 5/012](#), [G01S 5/013](#), [G01S 5/014](#), [G01S 5/015](#), [G01S 5/016](#), [G01S 5/017](#), [G01S 5/018](#), and [G01S 5/019](#). All groups listed in this Warning should be considered in order to perform a complete search.

- M G01S 5/0009
 - {Transmission of position information to remote stations (~~transmission of measured values in general, G08C; services making use of location of users or terminals, H04W 4/02~~ *involving assistance data [G01S 5/0236](#)*)}
- U G01S 5/009
 - • {Transmission of differential positioning data to mobile}
- N G01S 5/01
 - {Determining conditions which influence positioning, e.g. radio environment, state of motion or energy consumption}

WARNING

Group [G01S 5/01](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N G01S 5/011
- • {Identifying the radio environment}
- WARNING
- Group [G01S 5/011](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G01S 5/012
- • {Identifying whether indoors or outdoors}
- WARNING
- Group [G01S 5/012](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G01S 5/013
- • {Identifying areas in a building}
- WARNING
- Group [G01S 5/013](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G01S 5/014
- • {Identifying transitions between environments}
- WARNING
- Group [G01S 5/014](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G01S 5/015
- • • {between indoor and outdoor environments}
- WARNING
- Group [G01S 5/015](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G01S 5/016
- • • {between areas within a building}
- WARNING
- Group [G01S 5/016](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G01S 5/017
- • {Detecting state or type of motion}
- WARNING
- Group [G01S 5/017](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G01S 5/018
- • {Involving non-radio wave signals or measurements}
- WARNING
- Group [G01S 5/018](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G01S 5/019

- {Energy consumption}

WARNING

Group [G01S 5/019](#) is incomplete pending reclassification of documents from groups [G01S 5/00](#), [G01S 5/02](#), [G01S 5/0205](#), [G01S 19/48](#), and [G01S 19/49](#). All groups listed in this Warning should be considered in order to perform a complete search.

C G01S 5/02

- using radio waves (~~G01S 19/00 takes precedence~~ using satellite radio beacon systems for determining position [G01S 19/00](#))

WARNING

Group [G01S 5/02](#) is impacted by reclassification into groups [G01S 5/01](#), [G01S 5/011](#), [G01S 5/012](#), [G01S 5/013](#), [G01S 5/014](#), [G01S 5/015](#), [G01S 5/016](#), [G01S 5/017](#), [G01S 5/018](#), [G01S 5/019](#), [G01S 5/0244](#), [G01S 5/0246](#), [G01S 5/0249](#), [G01S 5/02524](#), [G01S 5/02525](#), [G01S 5/02526](#), [G01S 5/02527](#), [G01S 5/02529](#), [G01S 5/0269](#), [G01S 5/02695](#), [G01S 5/0295](#), [G01S 5/02955](#), [G01S 2205/01](#), [G01S 2205/02](#), [G01S 2205/03](#), [G01S 2205/04](#), [G01S 2205/05](#), [G01S 2205/06](#), [G01S 2205/07](#), [G01S 2205/08](#), [G01S 2205/09](#), and [G01S 2205/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C G01S 5/0205

- {Details}

WARNING

Group [G01S 5/0205](#) is impacted by reclassification into groups [G01S 5/01](#), [G01S 5/011](#), [G01S 5/013](#), [G01S 5/012](#), [G01S 5/014](#), [G01S 5/015](#), [G01S 5/016](#), [G01S 5/017](#), [G01S 5/018](#), [G01S 5/019](#), and [G01S 5/0244](#). All groups listed in this Warning should be considered in order to perform a complete search.

C G01S 5/0215

- • {~~interference or multipath issues related to signal reception~~ [Interference](#)}

WARNING

Group [G01S 5/0215](#) is impacted by reclassification into group [G01S 5/0218](#).

Groups [G01S 5/0215](#) and [G01S 5/0218](#) should be considered in order to perform a complete search.

N G01S 5/0218

- • {Multipath in signal reception}

WARNING

Group [G01S 5/0218](#) is incomplete pending reclassification of documents from group [G01S 5/0215](#).

Groups [G01S 5/0215](#) and [G01S 5/0218](#) should be considered in order to perform a complete search.

C G01S 5/0221

- • {~~of receivers or network of receivers~~ [Receivers](#)}

WARNING

Group [G01S 5/0221](#) is impacted by reclassification into groups [G01S 5/02213](#) and [G01S 5/02216](#).

Groups [G01S 5/0221](#), [G01S 5/02213](#), and [G01S 5/02216](#) should be considered in order to perform a complete search.

- N G01S 5/02213 . . . {Receivers arranged in a network for determining the position of a transmitter}
- WARNING
Group [G01S 5/02213](#) is incomplete pending reclassification of documents from group [G01S 5/0221](#).
Groups [G01S 5/0221](#) and [G01S 5/02213](#) should be considered in order to perform a complete search.
- N G01S 5/02216 {Timing or synchronisation of the receivers}
- WARNING
Group [G01S 5/02216](#) is incomplete pending reclassification of documents from group [G01S 5/0221](#).
Groups [G01S 5/0221](#) and [G01S 5/02216](#) should be considered in order to perform a complete search.
- M G01S 5/0226 . . . {~~of transmitters or network of transmitters~~ [Transmitters](#)}~~{wireless system synchronisation per se H04B 7/2662}~~
- M G01S 5/0236 . . . {~~Receiving assistance~~ [Assistance](#) data, e.g. base station almanac}
- C G01S 5/0242 . . . {~~locating transmitters to be used for~~ [Determining the position of transmitters to be subsequently used in](#) positioning ([G01S 5/0289](#) takes precedence)}
- WARNING
Group [G01S 5/0242](#) is impacted by reclassification into group [G01S 5/0249](#).
Groups [G01S 5/0242](#) and [G01S 5/0249](#) should be considered in order to perform a complete search.
- N G01S 5/0244 . . . {Accuracy or reliability of position solution or of measurements contributing thereto}
- WARNING
Group [G01S 5/0244](#) is incomplete pending reclassification of documents from groups [G01S 5/02](#) and [G01S 5/0205](#).
Groups [G01S 5/02](#), [G01S 5/0205](#), and [G01S 5/0244](#) should be considered in order to perform a complete search.
- N G01S 5/0246 . . {involving frequency difference of arrival or Doppler measurements ([G01S 5/02685](#) takes precedence)}
- WARNING
Group [G01S 5/0246](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
Groups [G01S 5/02](#) and [G01S 5/0246](#) should be considered in order to perform a complete search.
- M G01S 5/0247 . . {~~Determination of attitude~~ [Determining attitude](#)}~~(using inertial means G01C 9/00; control of attitude G05D 1/08)}~~
- N G01S 5/0249 . . {Determining position using measurements made by a non-stationary device other than the device whose position is being determined}
- WARNING
Group [G01S 5/0249](#) is incomplete pending reclassification of documents from groups [G01S 5/02](#) and [G01S 5/0242](#).
Groups [G01S 5/02](#), [G01S 5/0242](#), and [G01S 5/0249](#) should be considered in order to perform a complete search.

- C G01S 5/0252
- • {~~by comparing measured values with pre-stored measured or simulated values~~Radio frequency fingerprinting}

NOTE

In this group, the following terms are used with the meaning indicated:

- Radio frequency fingerprints mean measurements or simulated values of radio frequency signal parameters, e.g. receiver signal strength indicator [RSSI] or identifiers or access point identifiers [ApIds] combined with coordinates of the positions at which the radio frequency fingerprints were measured.
- "Radio-map" means a collection of radio frequency fingerprints.

WARNING

Group G01S 5/0252 is impacted by reclassification into groups G01S 5/02521, G01S 5/02522, G01S 5/02523, G01S 5/02524, G01S 5/02525, G01S 5/02526, G01S 5/02527, G01S 5/02528, and G01S 5/02529.

All groups listed in this Warning should be considered in order to perform a complete search.

- N G01S 5/02521
- • • {using a radio-map}

WARNING

Group [G01S 5/02521](#) is incomplete pending reclassification of documents from group [G01S 5/0252](#).

Groups [G01S 5/0252](#) and [G01S 5/02521](#) should be considered in order to perform a complete search.

- N G01S 5/02522
- • • • {The radio-map containing measured values of non-radio values}

WARNING

Group [G01S 5/02522](#) is incomplete pending reclassification of documents from group [G01S 5/0252](#).

Groups [G01S 5/0252](#) and [G01S 5/02522](#) should be considered in order to perform a complete search.

- N G01S 5/02523
- • • • {Details of interaction of receiver with radio-map}

WARNING

Group [G01S 5/02523](#) is incomplete pending reclassification of documents from group [G01S 5/0252](#).

Groups [G01S 5/0252](#) and [G01S 5/02523](#) should be considered in order to perform a complete search.

- N G01S 5/02524
- • • • {Creating or updating the radio-map}

WARNING

Group [G01S 5/02524](#) is incomplete pending reclassification of documents from groups [G01S 5/02](#) and [G01S 5/0252](#).

Groups [G01S 5/02](#), [G01S 5/0252](#), and [G01S 5/02524](#) should be considered in order to perform a complete search.

- N G01S 5/02525
- • • • • {Gathering the radio frequency fingerprints}

WARNING

Group [G01S 5/02525](#) is incomplete pending reclassification of documents from groups [G01S 5/02](#) and [G01S 5/0252](#).

Groups [G01S 5/02](#), [G01S 5/0252](#), and [G01S 5/02525](#) should be considered in order to perform a complete search.

- N G01S 5/02526 {using non-dedicated equipment, e.g. user equipment or crowd-sourcing}
- WARNING
Group [G01S 5/02526](#) is incomplete pending reclassification of documents from groups [G01S 5/02](#) and [G01S 5/0252](#).
Groups [G01S 5/02](#), [G01S 5/0252](#), and [G01S 5/02526](#) should be considered in order to perform a complete search.
- N G01S 5/02527 {Detecting or resolving anomalies in the radio frequency fingerprints of the radio-map}
- WARNING
Group [G01S 5/02527](#) is incomplete pending reclassification of documents from groups [G01S 5/02](#) and [G01S 5/0252](#).
Groups [G01S 5/02](#), [G01S 5/0252](#), and [G01S 5/02527](#) should be considered in order to perform a complete search.
- N G01S 5/02528 . . . {Simulating radio frequency fingerprints}
- WARNING
Group [G01S 5/02528](#) is incomplete pending reclassification of documents from group [G01S 5/0252](#).
Groups [G01S 5/0252](#) and [G01S 5/02528](#) should be considered in order to perform a complete search.
- N G01S 5/02529 . . . {not involving signal parameters, i.e. only involving identifiers}
- WARNING
Group [G01S 5/02529](#) is incomplete pending reclassification of documents from groups [G01S 5/02](#) and [G01S 5/0252](#).
Groups [G01S 5/02](#), [G01S 5/0252](#), and [G01S 5/02529](#) should be considered in order to perform a complete search.
- C G01S 5/0257 . . {Hybrid positioning ~~solutions~~ (by coordinating position lines of different shape [G01S 5/12](#))}
- WARNING
Group [G01S 5/0257](#) is impacted by reclassification into groups [G01S 5/0258](#) and [G01S 5/02585](#).
Groups [G01S 5/0257](#), [G01S 5/0258](#), and [G01S 5/02585](#) should be considered in order to perform a complete search.
- N G01S 5/0258 . . . {by combining or switching between measurements derived from different systems}
- WARNING
Group [G01S 5/0258](#) is incomplete pending reclassification of documents from group [G01S 5/0257](#).
Groups [G01S 5/0257](#) and [G01S 5/0258](#) should be considered in order to perform a complete search.
- N G01S 5/02585 {at least one of the measurements being a non-radio measurement}
- WARNING
Group [G01S 5/02585](#) is incomplete pending reclassification of documents from group [G01S 5/0257](#).
Groups [G01S 5/0257](#) and [G01S 5/02585](#) should be considered in order to perform a complete search.

- C G01S 5/0263
- • • {~~employing positioning solutions derived from one of several~~by combining or switching between positions derived from two or more separate positioning systems}
- WARNING
Group [G01S 5/0263](#) is impacted by reclassification into group [G01S 5/0264](#).
Groups [G01S 5/0263](#) and [G01S 5/0264](#) should be considered in order to perform a complete search.
- N G01S 5/0264
- • • {at least one of the systems being a non-radio wave positioning system}
- WARNING
Group [G01S 5/0264](#) is incomplete pending reclassification of documents from group [G01S 5/0263](#).
Groups [G01S 5/0263](#) and [G01S 5/0264](#) should be considered in order to perform a complete search.
- C G01S 5/0268
- • • {~~employing positioning solutions derived from~~by deriving positions from different combinations of signals or of estimated positions in a single positioning system}
- WARNING
Group [G01S 5/0268](#) is impacted by reclassification into group [G01S 5/02685](#).
Groups [G01S 5/0268](#) and [G01S 5/02685](#) should be considered in order to perform a complete search.
- N G01S 5/02685
- • • {involving dead reckoning based on radio wave measurements}
- WARNING
Group [G01S 5/02685](#) is incomplete pending reclassification of documents from group [G01S 5/0268](#).
Groups [G01S 5/0268](#) and [G01S 5/02685](#) should be considered in order to perform a complete search.
- N G01S 5/0269
- • {Inferred or constrained positioning, e.g. employing knowledge of the physical or electromagnetic environment, state of motion or other contextual information to infer or constrain a position}
- WARNING
Group [G01S 5/0269](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
Groups [G01S 5/02](#) and [G01S 5/0269](#) should be considered in order to perform a complete search.
- N G01S 5/02695
- • • {Constraining the position to lie on a curve or surface}
- WARNING
Group [G01S 5/02695](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
Groups [G01S 5/02](#) and [G01S 5/02695](#) should be considered in order to perform a complete search.
- M G01S 5/0294
- • {~~Tracking, i.e. predictive filtering, e.g.~~Trajectory determination or predictive filtering, e.g. target tracking or Kalman filtering}
- N G01S 5/0295
- • {Proximity-based methods, e.g. position inferred from reception of particular signals}
- WARNING
Group [G01S 5/0295](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).

Groups [G01S 5/02](#) and [G01S 5/0295](#) should be considered in order to perform a complete search.

N G01S 5/02955

- • {by computing a weighted average of the positions of the signal transmitters}

WARNING

Group [G01S 5/02955](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).

Groups [G01S 5/02](#) and [G01S 5/02955](#) should be considered in order to perform a complete search.

Project: N/A (G01S)

G01S 19/00

Satellite radio beacon positioning systems; Determining position, velocity or attitude using signals transmitted by such systems

NOTE

In this group, or in the patent documents classified in this group, the following abbreviations are often used:

- *PDOP = Position Dilution of Precision*
- *RAIM = Receiver Autonomous Integrity Monitoring*
- DGPS = Differential GPS
- Pseudolite = Pseudolite is a contraction of the term "pseudo-satellite," used to refer to the mimicing of GPS satellites (or of other navigation satellites) by other transceivers.
- WAAS = Wide Area Augmentation System

Project: RP0247 (G01S)

U G01S 19/38

- Determining a navigation solution using signals transmitted by a satellite radio beacon positioning system

U G01S 19/39

- • the satellite radio beacon positioning system transmitting time-stamped messages, e.g. GPS [Global Positioning System], GLONASS [Global Orbiting Navigation Satellite System] or GALILEO

WARNING

Group [G01S 19/39](#) is impacted by reclassification into groups [G01S 19/393](#) and [G01S 19/396](#).

Groups [G01S 19/39](#), [G01S 19/393](#), and [G01S 19/396](#) should be considered in order to perform a complete search.

U G01S 19/42

- • Determining position

C G01S 19/48

- • • by combining or switching between position solutions derived from the satellite radio beacon positioning system and position solutions derived from a further system

WARNING

Group [G01S 19/48](#) is impacted by reclassification into groups [G01S 5/01](#), [G01S 5/011](#), [G01S 5/012](#), [G01S 5/013](#), [G01S 5/014](#), [G01S 5/015](#), [G01S 5/016](#), [G01S 5/017](#), [G01S 5/018](#), [G01S 5/019](#), and [G01S 19/485](#). All groups listed in this Warning should be considered in order to perform a complete search.

N G01S 19/485

- • • • {whereby the further system is an optical system or imaging system}

WARNING

Group [G01S 19/485](#) is incomplete pending reclassification of documents from groups [G01S 19/48](#) and [G01S 19/49](#).

Groups [G01S 19/48](#), [G01S 19/49](#), and [G01S 19/485](#) should be considered in order to perform a complete search.

- C G01S 19/49
- • • • whereby the further system is an inertial position system, e.g. loosely-coupled

NOTE

This group does not adequately cover combining inertial navigation measurements with a non-inertial navigation instrument; also see [G01C 21/165](#).

WARNING

Group [G01S 19/49](#) is impacted by reclassification into groups [G01S 5/01](#), [G01S 5/011](#), [G01S 5/012](#), [G01S 5/013](#), [G01S 5/014](#), [G01S 5/015](#), [G01S 5/016](#), [G01S 5/017](#), [G01S 5/018](#), [G01S 5/019](#), and [G01S 19/485](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- M G01S 2205/00
- Position-fixing by co-ordinating two or more direction or position line determinations; Indexing scheme associated with group Position-fixing by co-ordinating two or more distance determinations**

- U G01S 2205/001
- Transmission of position information to remote stations
- U G01S 2205/008
- • using a mobile telephone network
- N G01S 2205/01
- specially adapted for specific applications

WARNING

Group [G01S 2205/01](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
Groups [G01S 5/02](#) and [G01S 2205/01](#) should be considered in order to perform a complete search.

- N G01S 2205/02
- • Indoor

WARNING

Group [G01S 2205/02](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
Groups [G01S 5/02](#) and [G01S 2205/02](#) should be considered in order to perform a complete search.

- N G01S 2205/03
- • Airborne

WARNING

Group [G01S 2205/03](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
Groups [G01S 5/02](#) and [G01S 2205/03](#) should be considered in order to perform a complete search.

- N G01S 2205/04
- • Nautical

WARNING

Group [G01S 2205/04](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
Groups [G01S 5/02](#) and [G01S 2205/04](#) should be considered in order to perform a complete search.

- N G01S 2205/05 • • Anti-theft or abduction
WARNING
 Group [G01S 2205/05](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
 Groups [G01S 5/02](#) and [G01S 2205/05](#) should be considered in order to perform a complete search.
- N G01S 2205/06 • • Emergency
WARNING
 Group [G01S 2205/06](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
 Groups [G01S 5/02](#) and [G01S 2205/06](#) should be considered in order to perform a complete search.
- N G01S 2205/07 • • Military
WARNING
 Group [G01S 2205/07](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
 Groups [G01S 5/02](#) and [G01S 2205/07](#) should be considered in order to perform a complete search.
- N G01S 2205/08 • • Sport
WARNING
 Group [G01S 2205/08](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
 Groups [G01S 5/02](#) and [G01S 2205/08](#) should be considered in order to perform a complete search.
- N G01S 2205/09 • • for tracking people
WARNING
 Group [G01S 2205/09](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
 Groups [G01S 5/02](#) and [G01S 2205/09](#) should be considered in order to perform a complete search.
- N G01S 2205/10 • • • Elderly or infirm
WARNING
 Group [G01S 2205/10](#) is incomplete pending reclassification of documents from group [G01S 5/02](#).
 Groups [G01S 5/02](#) and [G01S 2205/10](#) should be considered in order to perform a complete search.

Project: RP0287 (G01T)

- U G01T 1/00 **Measuring X-radiation, gamma radiation, corpuscular radiation, or cosmic radiation ([G01T 3/00](#), [G01T 5/00](#) take precedence)**
- U G01T 1/16 • Measuring radiation intensity ([G01T 1/29](#) takes precedence {; self-powered detectors [G01T 3/006](#); using an ionisation chamber filled with a liquid or solid, e.g. frozen liquid, dielectric [G01T 3/008](#)})
- U G01T 1/20 • • with scintillation detectors

Project: MP0301 (G01T)

- M G01T 1/2008 . . . {using a combination of different types of scintillation detectors, e.g. phoswich}

WARNING

Pending reclassification, for subject-matter regarding phoswich see also G01T 1/20

Project: RP0287 (G01T)

- C G01T 1/2018 . . . {Scintillation-photodiode ~~combination~~combinations}

WARNING

Group G01T 1/2018 is impacted by reclassification into groups G01T 1/20181 - G01T 1/2019.

All groups listed in this Warning should be considered in order to perform a complete search.

- N G01T 1/20181 . . . {Stacked detectors, e.g. for measuring energy and positional information (using a combination of different types of scintillation detectors, e.g. phoswich detectors, [G01T 1/2008](#))}

WARNING

Group [G01T 1/20181](#) is incomplete pending reclassification from group [G01T 1/2018](#).

Group [G01T 1/2018](#) and [G01T 1/20181](#) should be considered in order to perform a complete search.

- N G01T 1/20182 . . . {Modular detectors, e.g. tiled scintillators or tiled photodiodes (stacked detectors [G01T 1/20181](#))}

WARNING

Group [G01T 1/20182](#) is incomplete pending reclassification from group [G01T 1/2018](#).

Groups [G01T 1/2018](#) and [G01T 1/20182](#) should be considered in order to perform a complete search.

- N G01T 1/20183 . . . {Arrangements for preventing or correcting crosstalk, e.g. optical or electrical arrangements for correcting crosstalk}

WARNING

Group [G01T 1/20183](#) is incomplete pending reclassification from group [G01T 1/2018](#).

Groups [G01T 1/2018](#) and [G01T 1/20183](#) should be considered in order to perform a complete search.

- N G01T 1/20184 . . . {Detector read-out circuitry, e.g. for clearing of traps, compensating for traps or compensating for direct hits}

WARNING

Group [G01T 1/20184](#) is incomplete pending reclassification from group [G01T 1/2018](#).

Groups [G01T 1/2018](#) and [G01T 1/20184](#) should be considered in order to perform a complete search.

- N G01T 1/20185 . . . {Coupling means between the photodiode and the scintillator, e.g. optical couplings using adhesives with wavelength-shifting fibres}

WARNING

Group [G01T 1/20185](#) is incomplete pending reclassification from group [G01T 1/2018](#).

Groups [G01T 1/2018](#) and [G01T 1/20185](#) should be considered in order to perform a complete search.

- N G01T 1/20186 {Position of the photodiode with respect to the incoming radiation, e.g. in the front of, below or sideways the scintillator}
- WARNING
Group [G01T 1/20186](#) is incomplete pending reclassification from group [G01T 1/2018](#).
Groups [G01T 1/2018](#) and [G01T 1/20186](#) should be considered in order to perform a complete search.
- N G01T 1/20187 {Position of the scintillator with respect to the photodiode, e.g. photodiode surrounding the crystal, the crystal surrounding the photodiode, shape or size of the scintillator}
- WARNING
Group [G01T 1/20187](#) is incomplete pending reclassification from group [G01T 1/2018](#).
Groups [G01T 1/2018](#) and [G01T 1/20187](#) should be considered in order to perform a complete search.
- N G01T 1/20188 {Auxiliary details, e.g. casings or cooling}
- WARNING
Groups [G01T 1/20188](#), [G01T 1/20189](#), and [G01T 1/2019](#) are incomplete pending reclassification from group [G01T 1/2018](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G01T 1/20189 {Damping or insulation against damage, e.g. caused by heat or pressure}
- N G01T 1/2019 {Shielding against direct hits}

Project: RP0110-F (G02B)

- U G02B 1/00 **Optical elements characterised by the material of which they are made (compositions of optical glasses [C03C 3/00](#); cements for glass [C03C 27/00](#))**
- U G02B 1/10 Optical coatings produced by application to, or surface treatment of, optical elements ([G02B 1/08](#) takes precedence)
- D G02B 1/105 {Protective coatings}
- (Frozen)
- WARNING
Group G02B 1/105 is no longer used for the classification of documents as of January 15, 2015. The backfile of this group is being reclassified into groups G02B 1/14, G02B 1/16 – G02B 1/18.
- Until reclassification is complete, groups G02B 1/105 and G02B 1/14 – G02B 1/18 should be considered in order to perform a complete search.
- U G02B 1/11 Anti-reflection coatings
- M G02B 1/111 using layers comprising organic materials

WARNING

Group G02B 1/111 is incomplete pending reclassification of documents from group G02B 1/118.

Until reclassification is complete, groups G02B 1/111 and G02B 1/118 should be considered in order to perform a complete search.

- M G02B 1/113
- • • using inorganic layer materials only
- WARNING**
Groups G02B 1/113 – G02B 1/116 are incomplete pending reclassification of documents from group G02B 1/118.

Until reclassification is complete, groups G02B 1/113 – G02B 1/116 and G02B 1/118 should be considered in order to perform a complete search.
- M G02B 1/14
- • Protective coatings, e.g. hard coatings
- WARNING**
Group G02B 1/14 is incomplete pending reclassification of documents from group G02B 1/105.

Until reclassification is complete, groups G02B 1/14 and G02B 1/105 should be considered in order to perform a complete search.
- M G02B 1/16
- • having an anti-static effect, e.g. electrically conducting coatings
- WARNING**
Group G02B 1/16 is incomplete pending reclassification of documents from groups G02B 1/10, G02B 1/105 and G02B 1/116.

Until reclassification is complete, groups G02B 1/16, G02B 1/10, G02B 1/105 and G02B 1/116 should be considered in order to perform a complete search.
- M G02B 1/18
- • Coatings for keeping optical surfaces clean, e.g. hydrophobic or photo-catalytic films ([G02B 1/16](#) takes precedence)
- WARNING**
Group G02B 1/18 is incomplete pending reclassification of documents from groups G02B 1/10, G02B 1/105 and G02B 27/0006.

Until reclassification is complete, groups G02B 1/18, G02B 1/10, G02B 1/105 and G02B 27/0006 should be considered in order to perform a complete search.

Project: RP0121 (G02B)

- U G02B 6/00** **Light guides**
- U G02B 6/24
- Coupling light guides (for electric waveguides [H01P 1/00](#))
- U G02B 6/26
- • Optical coupling means ([G02B 6/36](#), [G02B 6/42](#) take precedence)
- U G02B 6/35
- • • having switching means (optical switching in general [G02B 26/08](#); by changing the optical properties of the medium [G02F 1/00](#))
- G02B 6/3598
- • • {Switching means directly located between an optoelectronic element and waveguides, including direct displacement of either the element or the waveguide, e.g. optical pulse generation (based on changing the optical properties of the medium [G02F 1/00](#); optical pulse generation in optical transmitters ~~H04B 10/152~~ [H04B 10/508](#); optical pulse generation by controlling laser operation [H01S 3/00](#))}

Project: MP0301 (G02B)

- U G02B 6/36
- • Mechanical coupling means ({[G02B 6/06](#), [G02B 6/30](#), [G02B 6/35](#), [G02B 6/38](#)}, [G02B 6/255](#), [G02B 6/42](#) take precedence)
- U G02B 6/38
- • • having fibre to fibre mating means
- U G02B 6/3807
- • • • {Dismountable connectors, i.e. comprising plugs}

- M G02B 6/3887 • • • • {Anchoring optical cables to connector housings, e.g. strain relief features, bending protection}

WARNING

Not complete. See also G02B 6/4428

- M G02B 6/389 • • • • {characterised by the method of fastening connecting plugs and sockets, e.g. screw- or nut-lock, snap-in, bayonet type}

WARNING

Not complete. See also groups H01R 13/625, H01R 13/621, H01R 13/627

Project: RP0121 (G02F)

- U G02F 2/00 **Demodulating light; Transferring the modulation of modulated light; Frequency-changing of light (G02F 1/35 takes precedence)**

- G02F 2/002 • {using optical mixing (~~homodyne, heterodyne systems H04B 10/142~~ *homodyne systems H04B 10/63; heterodyne systems H04B 10/64*)}

Project: MP0301 (G03B)

- M G03B 21/00 **Projectors or projection-type viewers; Accessories therefor (devices for changing pictures G03B 23/00)**

WARNING

Groups G03B 21/001 – G03B 21/008 are incomplete pending reclassification of documents from group G03B 21/00.

Until reclassification is complete, groups G03B 21/00 and G03B 21/001 – G03B 21/008 should be considered in order to perform a complete search.

- M G03B 21/14 • Details

WARNING

Groups G03B 21/142 – G03B 21/147 are incomplete pending reclassification of documents from group G03B 21/14.

Until reclassification is complete, groups G03B 21/14 and G03B 21/142 – G03B 21/147 should be considered in order to perform a complete search.

- U G03B 21/54 • Accessories
- U G03B 21/56 • • Projection screens
- U G03B 21/58 • • • collapsible, e.g. foldable; of variable area
- M G03B 21/585 • • • • Inflatable screens

WARNING

Group G03B 21/585 is incomplete pending reclassification of documents from group G03B 21/58.

Until reclassification is complete, groups G03B 21/58 and G03B 21/585 should be considered in order to perform a complete search.

- U G03B 21/60 • • • characterised by the nature of the surface
- M G03B 21/608 • • • • Fluid screens

WARNING

Group G03B 21/608 is incomplete pending reclassification of documents from group G03B 21/60.

Until reclassification is complete, groups G03B 21/60 and G03B 21/608 should be considered in order to perform a complete search.

Project: RP0282 (G03G)

U G03G 5/00 Recording members for original recording by exposure, e.g. to light, to heat, to electrons; Manufacture thereof; Selection of materials therefor (recording surfaces for measuring apparatus [G01D 15/34](#); photosensitive materials for photographic purposes [G03C](#))

U G03G 5/02 • Charge-receiving layers ([G03G 5/153](#) takes precedence)

U G03G 5/04 • • Photoconductive layers; Charge-generation layers or charge-transporting layers; Additives therefor; Binders therefor

U G03G 5/06 • • • characterised by the photoconductive material being organic

NOTE

In groups [G03G 5/06](#) - [G03G 5/0698](#), in the absence of an indication to the contrary, an invention is classified in the last appropriate place

U G03G 5/0601 • • • {Acyclic or carbocyclic compounds}

U G03G 5/0612 • • • • {containing nitrogen}

C G03G 5/0614 • • • • • {Amines}

WARNING

Group [G03G 5/0614](#) is impacted by reclassification into groups [G03G 5/06142](#) - [G03G 5/06149](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G03G 5/06142 • • • • • {arylamine}

WARNING

Groups [G03G 5/06142](#) - [G03G 5/061473](#) are incomplete pending reclassification of documents from group [G03G 5/0614](#).

Groups [G03G 5/0614](#) and [G03G 5/06142](#) - [G03G 5/061473](#) should be considered in order to perform a complete search.

N G03G 5/06144 • • • • • {diamine}

N G03G 5/061443 • • • • • {benzidine}

N G03G 5/061446 • • • • • {terphenyl-diamine}

N G03G 5/06145 • • • • • {triamine or greater}

N G03G 5/06147 • • • • • {alkenylarylamine}

N G03G 5/061473 • • • • • {plural alkenyl groups linked directly to the same aryl group}

N G03G 5/06149 • • • • • {enamine}

WARNING

Group [G03G 5/06149](#) is incomplete pending reclassification of documents from group [G03G 5/0614](#).

Groups [G03G 5/0614](#) and [G03G 5/06149](#) should be considered in order to perform a complete search.

U G03G 5/07 • • • • Polymeric photoconductive materials

C G03G 5/071 • • • • {obtained by reactions only involving carbon-to-carbon unsaturated bonds ([G03G 5/078](#) takes precedence)}

WARNING

Group [G03G 5/071](#) is impacted by reclassification into groups [G03G 5/072](#), [G03G 5/0732](#), [G03G 5/074](#) and [G03G 5/0745](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G03G 5/072 {comprising pending monoamine groups}
WARNING
Group [G03G 5/072](#) is incomplete pending reclassification of documents from groups [G03G 5/071](#) and [G03G 5/073](#). Groups [G03G 5/071](#), [G03G 5/073](#) and [G03G 5/072](#) should be considered in order to perform a complete search.
- C G03G 5/073 {comprising pending ~~carbazol~~[carbazole](#) groups}
WARNING
Group [G03G 5/073](#) is impacted by reclassification into group [G03G 5/072](#). Groups [G03G 5/073](#) and [G03G 5/072](#) should be considered in order to perform a complete search.
- N G03G 5/0732 {comprising pending alkenylarylamine}
WARNING
Group [G03G 5/0732](#) is incomplete pending reclassification of documents from group [G03G 5/071](#). Groups [G03G 5/071](#) and [G03G 5/0732](#) should be considered in order to perform a complete search.
- N G03G 5/074 {comprising pending diamine}
WARNING
Group [G03G 5/074](#) is incomplete pending reclassification of documents from group [G03G 5/071](#). Groups [G03G 5/071](#) and [G03G 5/074](#) should be considered in order to perform a complete search.
- N G03G 5/0745 {comprising pending hydrazone}
WARNING
Group [G03G 5/0745](#) is incomplete pending reclassification of documents from group [G03G 5/071](#). Groups [G03G 5/071](#) and [G03G 5/0745](#) should be considered in order to perform a complete search.
- U G03G 5/075 {obtained otherwise than by reactions only involving carbon-to-carbon unsaturated bonds ([G03G 5/078](#) takes precedence)}
- C G03G 5/076 {having a photoconductive moiety in the polymer backbone}
WARNING
Group [G03G 5/076](#) is impacted by reclassification into groups [G03G 5/0763](#), [G03G 5/0764](#), [G03G 5/0765](#), [G03G 5/0766](#) and [G03G 5/0767](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G03G 5/0763 {comprising arylamine moiety}
WARNING
Group [G03G 5/0763](#) - [G03G 5/0766](#) are incomplete pending reclassification of documents from group [G03G 5/076](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N G03G 5/0764 {triarylamine}
 N G03G 5/0765 {alkenylarylamine}
 N G03G 5/0766 {benzidine}
 N G03G 5/0767 {comprising hydrazone moiety}

WARNING

Group [G03G 5/0767](#) is incomplete pending reclassification of documents from group [G03G 5/076](#).
 Groups [G03G 5/076](#) and [G03G 5/0767](#) should be considered in order to perform a complete search.

Project: MP0439 (G04D)

- M G04D **APPARATUS OR TOOLS SPECIALLY DESIGNED FOR MAKING OR MAINTAINING CLOCKS OR WATCHES**

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0210-F (G06F)

- U G06F 21/00 **Security arrangements for protecting computers, components thereof, programs or data against unauthorised activity**
 U G06F 21/70 . Protecting specific internal or peripheral components, in which the protection of a component leads to protection of the entire computer
 U G06F 21/71 . . to assure secure computing or processing of information
 M G06F 21/75 . . . by inhibiting the analysis of circuitry or operation

WARNING

~~Group G06F 21/75 is impacted by reclassification into group G06F 21/755. Groups G06F 21/75 and G06F 21/755 should be considered in order to perform a complete search.~~

- M G06F 21/755 . . . {with measures against power attack}

WARNING

~~Group G06F 21/755 is incomplete pending reclassification of documents from group G06F 21/75. Groups G06F 21/75 and G06F 21/755 should be considered in order to perform a complete search.~~

Project: MP0439 (G06Q)

- M G06Q **DATA PROCESSING SYSTEMS OR METHODS, SPECIALLY ADAPTED FOR ADMINISTRATIVE, COMMERCIAL, FINANCIAL, MANAGERIAL, SUPERVISORY OR FORECASTING PURPOSES; SYSTEMS OR METHODS SPECIALLY ADAPTED FOR ADMINISTRATIVE, COMMERCIAL, FINANCIAL, MANAGERIAL, SUPERVISORY OR FORECASTING PURPOSES, NOT OTHERWISE PROVIDED FOR**

NOTES

1. Groups [G06Q 10/00](#) - [G06Q 50/00](#) and [G06Q 99/00](#) only cover systems or methods that involve significant data processing operations, i.e. data processing operations that need to be carried out by a technological, e.g. computing, system or device. Group [G06Q 90/00](#) covers systems or methods that do not involve significant data processing, when both of the following conditions are fulfilled:

- the systems or methods are specially adapted for the purposes mentioned in the subclass title or the titles of groups [G06Q 10/00](#) - [G06Q 50/00](#); and
 - the systems or methods cannot be classified elsewhere in the IPC, for example by applying the principles described in paragraph 96 of the Guide.
- When classifying such systems or methods in group [G06Q 90/00](#), additional classification may be made in the most closely related group of this or any other subclass, if this classification gives information about the application of the systems or methods that could be of interest for searching. Such non-obligatory classification must be given as "additional information".
2. When classifying in groups [G06Q 10/00](#) - [G06Q 40/00](#), systems or methods that are specially adapted for a specific business sector must also be classified in group [G06Q 50/00](#), when the special adaptation is determined to be novel and non-obvious.
3. In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

WARNING

1. [G06Q](#) has been largely refined to bring most of the former USPC 705 groups into ECLA, prior to CPC launch. Therefore, most of the new [G06Q](#) subdivisions are not complete pending reclassification. Users are invited to systematically consult also the hierarchically higher groups, up to the first valid IPC group. For example, while searching in [G06Q 50/2053](#), it is appropriate to consult also [G06Q 50/205](#) and [G06Q 50/20](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0027 (G06Q)

U G06Q 10/00

Administration; Management

M G06Q 10/06

- Resources, workflows, human or project management, e.g. organising, planning, scheduling or allocating time, human or machine resources; Enterprise planning; Organisational models {{financial asset management [G06Q 40/06](#)}}

WARNING

Group [G06Q 10/06](#) is incomplete pending reclassification of documents from group [E21B 41/0092](#).

Groups [E21B 41/0092](#) and [G06Q 10/06](#) should be considered in order to perform a complete search.

Project: RP0453 (G06Q)

U G06Q 20/00

Payment architectures, schemes or protocols (apparatus for performing or posting payment transactions [G07F 7/08](#), [G07F 19/00](#); electronic cash registers [G07G 1/12](#))

U G06Q 20/02

- involving a neutral party, e.g. certification authority, notary or trusted third party [TTP]

M G06Q 20/023

- • {~~characterized in that the neutral party is~~ *the neutral party being* a clearing house}

U G06Q 20/04

- Payment circuits

M G06Q 20/045

- • {~~characterized in that the payment protocol involves at least one ticket~~ *using payment protocols involving tickets*}

D G06Q 20/0453

- • • {~~the ticket being an electronic receipt~~
<administratively transferred to [G06Q 20/047](#)>

M	G06Q 20/0457	<ul style="list-style-type: none"> • • • {characterized in that the ticket isthe tickets being sent electronically}
N	G06Q 20/047	<ul style="list-style-type: none"> • • {using payment protocols involving electronic receipts}
U	G06Q 20/08	<ul style="list-style-type: none"> • Payment architectures
T	G06Q 20/20	<ul style="list-style-type: none"> • • Point-of-sale [POS] network systems {(POS per se G07F or G07G)} <p>WARNING Group G06Q 20/20 is incomplete pending reclassification of documents from group G06Q 20/206. Groups G06Q 20/206 and G06Q 20/20 should be considered in order to perform a complete search.</p>
C	G06Q 20/206	<ul style="list-style-type: none"> • • • {comprising security or user identification provisionoperator identification provisions, e.g. password entry} <p>WARNING Group G06Q 20/206 is impacted by reclassification into group G06Q 20/20. Groups G06Q 20/206 and G06Q 20/20 should be considered in order to perform a complete search.</p>
U	G06Q 20/22	<ul style="list-style-type: none"> • Payment schemes or models
M	G06Q 20/227	<ul style="list-style-type: none"> • • {characterizedcharacterised in that multiple accounts are available, e.g. to the payer}
N	G06Q 20/229	<ul style="list-style-type: none"> • • {Hierarchy of users of accounts}
N	G06Q 20/2295	<ul style="list-style-type: none"> • • • {Parent-child type, e.g. where parent has control on child rights}
C	G06Q 20/30	<ul style="list-style-type: none"> • characterised by the use of specific devices {or networks} <p>WARNING Group G06Q 20/30 is impacted by reclassification into groups G06Q 20/306 and G06Q 20/308. Groups G06Q 20/30, G06Q 20/306, and G06Q 20/308 should be considered in order to perform a complete search.</p>
M	G06Q 20/305	<ul style="list-style-type: none"> • • {using a wired telephone network to facilitate paymentwired telephone networks}
N	G06Q 20/306	<ul style="list-style-type: none"> • • {using TV related infrastructures (external card used for payment with client device H04N 21/4185)} <p>WARNING Group G06Q 20/306 is incomplete pending reclassification of documents from group G06Q 20/30. Groups G06Q 20/30 and G06Q 20/306 should be considered in order to perform a complete search.</p>
N	G06Q 20/308	<ul style="list-style-type: none"> • • {using the Internet of Things} <p>WARNING Group G06Q 20/308 is incomplete pending reclassification of documents from group G06Q 20/30. Groups G06Q 20/30 and G06Q 20/308 should be considered in order to perform a complete search.</p>
C	G06Q 20/32	<ul style="list-style-type: none"> • • using wireless devices <p>WARNING Group G06Q 20/32 is impacted by reclassification into groups G06Q 20/321, G06Q 20/326, G06Q 20/3263, G06Q 20/3265, and G06Q 20/3267. All groups listed in this Warning should be considered in order to perform a complete search.</p>

- N G06Q 20/321
- • • {using wearable devices}
- WARNING
Group [G06Q 20/321](#) is incomplete pending reclassification of documents from group [G06Q 20/32](#).
Groups [G06Q 20/32](#) and [G06Q 20/321](#) should be considered in order to perform a complete search.
- U G06Q 20/322
- • • {Aspects of commerce using mobile devices [M-devices]}
- M G06Q 20/3227
- • • • {Use of a security using secure elements embedded in M-devices}
- U G06Q 20/325
- • • {using wireless networks}
- M G06Q 20/3255
- • • • {using an SMS for payment mobile network messaging services for payment, e.g. SMS}
- N G06Q 20/326
- • • {Payment applications installed on the mobile devices}
- WARNING
Groups [G06Q 20/326](#) – [G06Q 20/3267](#) are incomplete pending reclassification of documents from group [G06Q 20/32](#).
Groups [G06Q 20/32](#) and [G06Q 20/326](#) – [G06Q 20/3267](#) should be considered in order to perform a complete search.
- N G06Q 20/3263
- • • • {characterised by activation or deactivation of payment capabilities}
- N G06Q 20/3265
- • • • {characterised by personalisation for use}
- N G06Q 20/3267
- • • • {In-app payments}
- U G06Q 20/34
- • using cards, e.g. integrated circuit [IC] cards or magnetic cards
- M G06Q 20/353
- • • {Payments by additional cards plugged into cards read by M-devices}
- U G06Q 20/357
- • • {Cards having a plurality of specified features}
- D G06Q 20/3578
- • • • {Hierarchy of users of cards}
- <administratively transferred to [G06Q 20/229](#)>
- D G06Q 20/35785
- • • • {Parent-child type, i.e. where parent has control on child rights}
- <administratively transferred to [G06Q 20/2295](#)>
- U G06Q 20/36
- • using electronic wallets or electronic money safes
- M G06Q 20/363
- • • {with the personal data files for of a user}
- M G06Q 20/367
- • • {involving intelligent token, e.g. electronic purse electronic purses or money safes}
- M G06Q 20/3672
- • • • {Intelligent token initializing or reloading initialising or reloading thereof}
- C G06Q 20/38
- Payment protocols; Details thereof
- WARNING
Group [G06Q 20/38](#) is impacted by reclassification into groups [G06Q 20/384](#) and [G06Q 20/386](#).
Groups [G06Q 20/38](#), [G06Q 20/384](#), and [G06Q 20/386](#) should be considered in order to perform a complete search.
- U G06Q 20/383
- • {Anonymous user system}
- N G06Q 20/384
- • {using social networks}
- WARNING
Group [G06Q 20/384](#) is incomplete pending reclassification of documents from group [G06Q 20/38](#).
Groups [G06Q 20/38](#) and [G06Q 20/384](#) should be considered in order to perform a complete search.
- M G06Q 20/385
- • {Use of using an alias or a single-use code codes}

N	G06Q 20/386	<ul style="list-style-type: none"> • {using messaging services or messaging apps (using mobile network messaging services for payment, e.g. SMS G06Q 20/3255)} <p><u>WARNING</u> Group G06Q 20/386 is incomplete pending reclassification of documents from group G06Q 20/38. Groups G06Q 20/38 and G06Q 20/386 should be considered in order to perform a complete search.</p>
M	G06Q 20/388	<ul style="list-style-type: none"> • {Mutual authentication without cardsusing mutual authentication without cards, e.g. challenge-response}
U	G06Q 20/40	<ul style="list-style-type: none"> • Authorisation, e.g. identification of payer or payee, verification of customer or shop credentials; Review and approval of payers, e.g. check credit lines or negative lists
C	G06Q 20/401	<ul style="list-style-type: none"> • • {Transaction verification} <p><u>WARNING</u> Group G06Q 20/401 is impacted by reclassification into groups G06Q 20/4015 and G06Q 20/40155. Groups G06Q 20/401, G06Q 20/4015, and G06Q 20/40155 should be considered in order to perform a complete search.</p>
M	G06Q 20/4012	<ul style="list-style-type: none"> • • • {Verifying personal identification numbernumbers [PIN]}
M	G06Q 20/4014	<ul style="list-style-type: none"> • • • {Identity check for transactiontransactions}
U	G06Q 20/40145	<ul style="list-style-type: none"> • • • • {Biometric identity checks}
N	G06Q 20/4015	<ul style="list-style-type: none"> • • • • {using location information} <p><u>WARNING</u> Groups G06Q 20/4015 and G06Q 20/40155 are incomplete pending reclassification of documents from group G06Q 20/401. Groups G06Q 20/401, G06Q 20/4015, and G06Q 20/40155 should be considered in order to perform a complete search.</p>
N	G06Q 20/40155	<ul style="list-style-type: none"> • • • • {for triggering transactions}
U	G06Q 20/4016	<ul style="list-style-type: none"> • • • • {involving fraud or risk level assessment in transaction processing}
M	G06Q 20/409	<ul style="list-style-type: none"> • • • {CardDevice specific authentication in transaction processing}
M	G06Q 20/4093	<ul style="list-style-type: none"> • • • • {Monitoring of carddevice authentication}
M	G06Q 20/4097	<ul style="list-style-type: none"> • • • • {Mutual authentication between cardusing mutual authentication between devices and transaction partners}
M	G06Q 20/40975	<ul style="list-style-type: none"> • • • • • {Use of encryption for mutual authenticationusing encryption therefor}

Project: MP0439 (G06T)

M	G06T	<p>IMAGE DATA PROCESSING OR GENERATION, IN GENERAL</p> <p><u>WARNING</u></p> <p>1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups: G06T 1/40 covered by G06T 1/20</p> <p>2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.</p>
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Project: MP0439 (G07D)

M G07D HANDLING OF COINS OR VALUABLE PAPERS, e.g. TESTING, SORTING BY DENOMINATIONS, COUNTING, DISPENSING, CHANGING OR DEPOSITING

NOTE

In this subclass, the following terms or expressions are used with the meaning indicated:

- "coins" also covers tokens of similar nature;
- "valuable papers" covers paper currency, banknotes, bills, cheques, vouchers, securities, bonds or similar valuable papers, irrespective of the material used for these, which represent monetary value that can be measured or verified.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0469 (G07D)

T G07D 5/00 Testing specially adapted to determine the identity or genuineness of coins, e.g. for segregating coins which are unacceptable or alien to a currency
~~{{in combination with apparatus freed or actuated by coins or the like G07F 3/00}}~~

NOTE

In groups [G07D 5/005](#) - [G07D 5/10](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.

Project: RP0469 (G07F)

M G07F 1/00 Coin inlet arrangements; Coins specially adapted to operate coin-free mechanisms ~~(coins in general A44C)~~

D G07F 3/00 ~~{Coin testing or sorting means or arrangements for coin-free apparatus (apparatus for testing coins for use apart from coin-free apparatus G07D)}~~

WARNING

The groups G07F 3/00 - G07F 3/027 are no longer used for the classification of new documents from October 1, 2007. The backlog of these groups is being continuously reclassified to the group G07D 5/00 and subgroups

<administratively transferred to [G07D 5/00](#)>

- D G07F 3/02 • {for testing coins}
 <administratively transferred to [G07D 5/00](#)>
- D G07F 3/022 • • {according to shape or size}
 <administratively transferred to [G07D 5/00](#)>
- D G07F 3/025 • • {according to material}
 <administratively transferred to [G07D 5/00](#)>
- D G07F 3/027 • • {according to milling or relief}
 <administratively transferred to [G07D 5/00](#)>
- D G07F 3/04 • {for sorting coins}
 <administratively transferred to [G07D 5/00](#)>

U G07F 5/00 Coin-actuated mechanisms; Interlocks

M	G07F 5/18	<ul style="list-style-type: none"> • specially adapted for controlling several coin-freed apparatus from one place (interlocks per se G07F 5/26)
M	G07F 5/24	<ul style="list-style-type: none"> • with change-giving (coin-changing mechanisms per se G07D)
M	G07F 7/00	Mechanisms actuated by objects other than coins to free or to actuate vending, hiring, coin or paper currency dispensing or refunding apparatus {{(handling coins or paper currencies apart from coin-freed or like apparatus G07D; complete banking systems G07F 19/00)}}
M	G07F 7/02	<ul style="list-style-type: none"> • by keys or other credit registering devices ({{for producing a coded signal for use together with coded identity cards G07F 7/10}})
C	G07F 9/00	Details other than those peculiar to special kinds or types of apparatus (coin inlet arrangements G07F 1/00; coin-testing arrangements G07F 3/00; coin-actuated mechanisms, interlocks G07F 5/00) WARNING <i>Group G07F 9/00 is impacted by reclassification into groups G07F 9/001, G07F 9/002, and G07F 9/009. All groups listed in this Warning should be considered in order to perform a complete search.</i>
N	G07F 9/001	<ul style="list-style-type: none"> • {Interfacing with vending machines using mobile or wearable devices} WARNING <i>Group G07F 9/001 is incomplete pending reclassification of documents from groups G07F 9/00 and G07F 9/002. Groups G07F 9/00, G07F 9/002, and G07F 9/001 should be considered in order to perform a complete search.</i>
Q	G07F 9/002	<ul style="list-style-type: none"> • {Vending machines being part of a centrally controlled network of vending machines} WARNING <i>Group G07F 9/002 is incomplete pending reclassification of documents from group G07F 9/00. Group G07F 9/002 is also impacted by reclassification into group G07F 9/001. Groups G07F 9/00, G07F 9/002, and G07F 9/001 should be considered in order to perform a complete search.</i>
M	G07F 9/006	<ul style="list-style-type: none"> • {Details of the software used for the vending machine <i>machines</i>}
N	G07F 9/009	<ul style="list-style-type: none"> • {User recognition or proximity detection} WARNING <i>Group G07F 9/009 is incomplete pending reclassification of documents from group G07F 9/00. Groups G07F 9/00 and G07F 9/009 should be considered in order to perform a complete search.</i>
U	G07F 9/02	<ul style="list-style-type: none"> • Devices for alarm or indication, e.g. when empty; Advertising arrangements in coin-freed apparatus (alarms or warning devices indicating the interruption of flow to be metered G07F 15/10)
C	G07F 9/023	<ul style="list-style-type: none"> • • {<i>Arrangements</i> for display, data presentation or advertising arrangements in payment activated and coin-freed apparatus} WARNING <i>Group G07F 9/023 is impacted by reclassification into group G07F 9/0235. Groups G07F 9/023 and G07F 9/0235 should be considered in order to perform a complete search.</i>

- N G07F 9/0235
- • • {the arrangements being full-front touchscreens}
- WARNING
Group [G07F 9/0235](#) is incomplete pending reclassification of documents from group [G07F 9/023](#).
Groups [G07F 9/023](#) and [G07F 9/0235](#) should be considered in order to perform a complete search.
- C G07F 11/00
- Coin-free apparatus for dispensing, or the like, discrete articles**
- WARNING
Group [G07F 11/00](#) is impacted by reclassification into group [G07F 11/004](#).
Groups [G07F 11/00](#) and [G07F 11/004](#) should be considered in order to perform a complete search.
- D G07F 11/002
- {where the dispenser is part of a centrally controlled network of dispensers}
- <administratively transferred to [G07F 9/002](#)>
- N G07F 11/004
- {Restocking arrangements therefor}
- WARNING
Group [G07F 11/004](#) is incomplete pending reclassification of documents from group [G07F 11/00](#).
Groups [G07F 11/00](#) and [G07F 11/004](#) should be considered in order to perform a complete search.
- U G07F 11/02
- from non-movable magazines
- U G07F 11/04
- • in which magazines the articles are stored one vertically above the other
- C G07F 11/16
- • • Delivery means
- WARNING
Group [G07F 11/16](#) is impacted by reclassification into group [G07F 11/163](#).
Groups [G07F 11/16](#) and [G07F 11/163](#) should be considered in order to perform a complete search.
- N G07F 11/163
- • • • {characterised by blocking access to the output bins}
- WARNING
Group [G07F 11/163](#) is incomplete pending reclassification of documents from group [G07F 11/16](#).
Groups [G07F 11/16](#) and [G07F 11/163](#) should be considered in order to perform a complete search.
- C G07F 11/165
- • • • {~~Delivery by means of an~~using xyz-picker or multi-dimensional article picking ~~arrangement~~arrangements}
- WARNING
Group [G07F 11/165](#) is impacted by reclassification into groups [G07F 11/1653](#) and [G07F 11/1657](#).
Groups [G07F 11/165](#), [G07F 11/1653](#), and [G07F 11/1657](#) should be considered in order to perform a complete search.
- N G07F 11/1653
- • • • • {the picking arrangements being collecting buckets}
- WARNING
Group [G07F 11/1653](#) is incomplete pending reclassification of documents from group [G07F 11/165](#).
Groups [G07F 11/165](#) and [G07F 11/1653](#) should be considered in order to perform a complete search.

- N G07F 11/1657 {the picking arrangements using suction}
- WARNING
Group [G07F 11/1657](#) is incomplete pending reclassification of documents from group [G07F 11/165](#).
Groups [G07F 11/165](#) and [G07F 11/1657](#) should be considered in order to perform a complete search.
- U G07F 11/46 . from movable storage containers or supports
- M G07F 11/48 . . the storage containers or supports, e.g. magazine, being pivotally mounted
(articles supported on pivotally mounted flaps or shelves in magazines G07F 11/06)
- M G07F 11/60 . . the storage containers or supports being rectilinearly movable (endless belts or like conveyors G07F 11/58)
- U G07F 13/00 Coin-freed apparatus for controlling dispensing of fluids, semiliquids or granular material from reservoirs**
- M G07F 13/10 . with associated dispensing of containers, e.g. cups or other articles (dispensing discrete articles per se G07F 11/00)
- M G07F 15/00 Coin-freed apparatus with meter-controlled dispensing of liquid, gas or electricity (tariff-metering apparatus in general G01D 4/00)**
- U G07F 17/00 Coin-freed apparatus for hiring articles; Coin-freed facilities or services**
- U G07F 17/10 . for means for safe-keeping of property, left temporarily, e.g. by fastening the property
- C G07F 17/12 . . comprising lockable containers, e.g. for accepting clothes to be cleaned
- WARNING
Group [G07F 17/12](#) is impacted by reclassification into group [G07F 17/13](#).
Groups [G07F 17/12](#) and [G07F 17/13](#) should be considered in order to perform a complete search.
- N G07F 17/13 . . . {the containers being a postal pick-up locker}
- WARNING
Group [G07F 17/13](#) is incomplete pending reclassification of documents from group [G07F 17/12](#).
Groups [G07F 17/12](#) and [G07F 17/13](#) should be considered in order to perform a complete search.
- M G07F 17/24 . for parking meters (devices for checking parking time G07C 1/30)
- M G07F 17/28 . for radio apparatus (television subscription systems H04N 7/16)
- M G07F 17/30 . for musical instruments (recording or playing apparatus G11B)
- M G07F 17/32 . for games, toys, sports or amusements, {e.g. casino games, online gambling or betting, or amusements (game play without financial reward A63F)}
- M G07F 17/3286 . . {Type of games}
- NOTE
Classification in this group is given only in addition to one or more symbols already given in groups G07F 17/3202 – G07F 17/3283
- M G07F 17/34 . . depending on the stopping of moving members {in a mechanical slot machine}, e.g. "fruit" machines
- NOTE
Classification in this group is given only in addition to one or more symbols already given in groups G07F 17/3202 – G07F 17/3283

- M G07F 17/38 • • Ball games; Shooting apparatus ~~{{(ball games, e.g. football, golf, bowls, without coin collection A63B)}}~~
- M G07F 19/00 Complete banking systems; Coded card-freed arrangements adapted for dispensing or receiving monies or the like and posting such transactions to existing accounts, e.g. automatic teller machines (data processing equipment for bank accounting [G06Q 40/02](#) ~~{{; mechanisms in general actuated by objects other than coins G07F 7/00; handling coins or paper currencies apart from payment activated apparatus G07D}}~~)

Project: MP0439 (G08B)

- M G08B **SIGNALLING OR CALLING SYSTEMS; ORDER TELEGRAPHS; ALARM SYSTEMS** ~~{{(signalling arrangements on vehicles [B60Q](#), [B62D 41/00](#); railway signalling systems or devices [B61L](#); on cycles [B62J 3/00](#), [B62J 6/00](#); signalling or alarm devices in mines [E21F 17/18](#); lamps or shutters therefor [F21](#); sensitive measuring elements, see the appropriate subclasses of [G01](#); traffic control systems [G08G](#); visual indicating means [G09](#); sound-producing devices [G10](#); radio or near-field calling systems [H04B 5/00](#), [H04B 7/00](#); selecting arrangements [H04Q 5/00](#), [H04Q 9/00](#); loudspeakers, microphones, gramophone pick-ups or like acoustic electromechanical transducers [H04R](#))}}~~

NOTES

1. This subclass covers also means for identifying or incapacitating burglars or the like.
2. This subclass does not cover:
 - the mere provision of an audible or visible signalling device on measuring or switching apparatus;
 - alarm systems for indicating that a specific variable has exceeded, or fallen below, a predetermined value, which are covered by the relevant subclasses of class [G01](#) for the measurement of that variable.
 - alarms for specific processes or types of machines or apparatus, which are covered by the relevant subclasses for the processes, machines, or apparatus.
3. In this subclass, the following term is used with the meaning indicated:
 - "systems" may cover also devices peculiar thereto.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0438 (G08C)

M G08C TRANSMISSION SYSTEMS FOR MEASURED VALUES, CONTROL OR SIMILAR SIGNALS (fluid pressure ~~transmission~~*transmitting* systems [F15B](#); sensing members for specific physical variables, see the relevant subclasses, e.g. of G01 or H01; indicators or recorders, see the relevant subclasses, e.g. G01D, G09F; mechanical means for transferring the output of a sensing member *into a different variable* [G01D 5/00](#); means for converting the output of the sensing member into a different variable [G01D 5/00](#); self-balancing bridges G01R; position control in general [G05D 3/00](#); mechanical control systems *system* [G05C](#); systems for transmitting "on/off" signals only, systems for transmitting alarm conditions G08B; order telegraph systems G08B 9/00; generating electric pulses H03K; coding, decoding or code conversion H03M; transmission of digital information H04L; selective calling from one station to another H04Q 9/00)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme:

- M G08C 13/00** Arrangements for influencing the relationship between signals at input and output, e.g. differentiating, delaying, ~~(transferring the output of a sensing member to an indicating or recording part not yielding momentary value G01D 1/00; systems for control of position involving comparison between actual and desired values G05D 3/00; computing G06)~~
- M G08C 15/00** Arrangements characterised by the use of multiplexing for the transmission of a plurality of signals over a common path ~~(multiplex transmission in general H04J)~~
- U G08C 19/00** Electric signal transmission systems ([G08C 17/00](#) takes precedence)
- M G08C 19/36** • using optical means to ~~convert~~*convert* the input signal {(analogue/digital converters *per se* H03M 1/00; *characterised by optical transfer means* [G01D 5/26](#); {optical analogue digital converters [G02F 7/00](#); contains no documents, see G01D 5/26})}
- M G08C 19/38** • using dynamo-electric devices (operated by pulses [G08C 19/20](#); ~~dynamo-electric machines *per se* H02K~~)
- M G08C 21/00** Systems for transmitting the position of an object with respect to a predetermined reference system, e.g. tele-autographic system ~~(converting the pattern of mechanical parameters, e.g. force or presence, into electrical signals G06K 11/00)~~

Project: MP0439 (G09D)

M G09D RAILWAY OR LIKE TIME OR FARE TABLES; PERPETUAL CALENDARS (calendar blocks [B42D 5/04](#); clockwork driven [G04B](#); comprising computing means [G06C](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0319 (G09F)

M G09F

DISPLAYING; ADVERTISING; SIGNS; LABELS OR NAME-PLATES; SEALS
~~(display cases A47F; designs or pictures characterised by special or unusual effects, e.g. changing B44F 1/00; disposition of road signs or traffic signals E01F 9/00; lighting in general F21; arrangements for controlling light beams G02F 1/00; visible signalling arrangements or devices G08B 5/00; traffic control systems G08G; arrangements or circuits for control of indicating devices using static means to present variable information G09G, {G06F 3/14}; static indicating arrangements comprising integral associations of a plurality of light sources H01J, H01K, H01L, H05B 33/12)~~

NOTES

1. In this subclass, the following term is used with the meaning indicated :
 - "sign" designates a mark or indication serving to make something recognisable, the information presented being non-varying, even if it is flashing; by way of example it covers, therefore, advertising hoardings, or luminous, or light reflecting, safety arrangements.
2. Attention is drawn to the Notes following the titles of class [B81](#) and subclass [B81B](#) relating to "microstructural devices" and "microstructural systems".

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M G09F 21/00

Mobile visual advertising (*combined visual and audible advertising G09F 27/00*)

U G09F 21/02

- by a carrier person or animal

D G09F 2021/023

- ~~{fixed on human dresses}~~
 <administratively transferred to [G09F 21/023](#)>

N G09F 21/023

- ~~{fixed on clothing}~~

C G09F 21/04

- by land vehicles

WARNING

*Group G09F 21/04 is impacted by reclassification into groups [G09F 21/04](#), [G09F 21/042](#) and [G09F 21/049](#).
 Groups [G09F 21/04](#), [G09F 21/042](#) and [G09F 21/049](#) should be considered in order to perform a complete search.*

D G09F 2021/041

- ~~{magnetically fixed on the vehicles}~~
 <administratively transferred to [G09F 21/041](#)>

N G09F 21/041

- ~~{magnetically fixed on the vehicles}~~

N G09F 21/042

- ~~{the advertising matter being fixed on the roof of the vehicles}~~

WARNING

*Group [G09F 21/042](#) is incomplete pending reclassification of documents from group [G09F 21/04](#).
 Groups [G09F 21/04](#) and [G09F 21/042](#) should be considered in order to perform a complete search.*

U G09F 21/048

- {Advertisement panels on sides, front or back of vehicles}

N G09F 21/049

- {giving information to passengers inside the vehicles}

WARNING

Group [G09F 21/049](#) is incomplete pending reclassification of documents from group [G09F 21/04](#).

Groups [G09F 21/04](#) and [G09F 21/049](#) should be considered in order to perform a complete search.

- U G09F 21/06
 - by aeroplanes, airships, balloons, or kites
- M G09F 21/12
 - • the advertising matter being towed by the aircraft (~~kites per se B64C 21/06~~)
- M G09F 21/16
 - • Sky-writing (~~aircraft adaptation for sky-writing B64D 1/20~~)

Project: MP0439 (G10G)

- M G10G AIDS FOR MUSIC (teaching music [G09B 15/00](#)); SUPPORTS FOR MUSICAL INSTRUMENTS; OTHER AUXILIARY DEVICES OR ACCESSORIES FOR MUSIC OR MUSICAL INSTRUMENTS (metronomes [G04F 5/02](#))

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0533 (G10K)

- U G10K 11/00 Methods or devices for transmitting, conducting or directing sound in general; Methods or devices for protecting against, or for damping, noise or other acoustic waves in general

- U G10K 11/16
 - Methods or devices for protecting against, or for damping, noise or other acoustic waves in general ([G10K 11/36](#) takes precedence)

NOTE

This group does not cover protecting against, or damping of, acoustic waves adapted for particular applications, which are covered by the subclasses for these applications, provided that there is a specific provision for this aspect.

- C G10K 11/175
 - • using interference effects; Masking sound

NOTES

1. Sound/noise masking, classified in [G10K 11/1752](#) - [G10K 11/1754](#),
2. Acoustic noise cancellation, classified in [G10K 11/178](#)

WARNING

Group [G10K 11/175](#) is impacted by reclassification into groups [G10K 11/1752](#) and [G10K 11/1754](#).

Groups [G10K 11/175](#), [G10K 11/1752](#), and [G10K 11/1754](#) should be considered in order to perform a complete search.

- N G10K 11/1752
 - • • {Masking}

WARNING

Group [G10K 11/1752](#) is incomplete pending reclassification of documents from group [G10K 11/175](#).

Groups [G10K 11/175](#) and [G10K 11/1752](#) should be considered in order to perform a complete search.

- N G10K 11/1754
 - • • {Speech masking}

WARNING

Group [G10K 11/1754](#) is incomplete pending reclassification of documents from group [G10K 11/175](#).

Groups [G10K 11/175](#) and [G10K 11/1754](#) should be considered in order to perform a complete search.

Project: MP0342 (G10L)

- U G10L 19/00** **Speech or audio signals analysis-synthesis techniques for redundancy reduction, e.g. in vocoders; Coding or decoding of speech or audio signals, using source filter models or psychoacoustic analysis (in musical instruments [G10H](#))**
- G10L 19/008
- Multichannel audio signal coding or decoding, i.e. using interchannel correlation to reduce redundancies, e.g. joint-stereo, intensity-coding, matrixing (~~arrangements for reproducing spatial sound H04R 5/00; stereophonic systems, e.g. spatial sound capture or matrixing of audio signals in the decoded state H04S~~)

Project: MP0301 (G11C)

- U G11C 11/00** **Digital stores characterised by the use of particular electric or magnetic storage elements; Storage elements therefor ([G11C 14/00](#) - [G11C 21/00](#) take precedence)**
- U G11C 11/21
- using electric elements
- U G11C 11/34
- • using semiconductor devices {(processes or apparatus for the manufacture or treatment of semiconductor or solid state devices [H01L 21/00](#); integrated circuit devices [H01L 27/00](#); generating electric pulses, e.g. bistable devices using semiconductor devices [H03K 3/00](#))}
- U G11C 11/40
- • • using transistors
- U G11C 11/401
- • • • forming cells needing refreshing or charge regeneration, i.e. dynamic cells
- U G11C 11/403
- • • • • with charge regeneration common to a multiplicity of memory cells, i.e. external refresh
- U G11C 11/404
- • • • • with one charge-transfer gate, e.g. MOS transistor, per cell
- M G11C 11/4045
- • • • • {using a plurality of serially connected access transistors, each having a storage capacitor}

WARNING

Not complete, see also [G11C 11/404](#)

Project: MP0439 (G16H)

- M G16H** **HEALTHCARE INFORMATICS, i.e. INFORMATION AND COMMUNICATION TECHNOLOGY [ICT] SPECIALLY ADAPTED FOR THE HANDLING OR PROCESSING OF MEDICAL OR HEALTHCARE DATA**

NOTES

1. This subclass covers cross-sectional aspects of computer, information or communication science with medical or healthcare science, where the focus is clearly placed on digital computing or data processing systems or methods, which are specially adapted for medical or healthcare science.
2. This subclass does not cover:
 - a. medical equipment, medical methods, methods of diagnosis, methods of treatment or therapy, clinical care or surgical procedures per se, which are covered by the relevant subclasses of [A61](#);
 - b. signal processing or signal transmission associated to diagnostic measurements, e.g. signal waveform analysis, which are covered by group [A61B 5/00](#).
3. In order to determine whether a technical subject relating to medical or healthcare science is classified in this subclass or in the relevant subclasses of [A61](#), the following should be observed:
 - a. to classify a technical subject in this subclass it is required that the essential technical features of the subject focus onto digital computing or data processing systems or methods;

- b. if the technical subject focuses onto aspects of medical science, e.g. physiological signals or medical conditions, or if the subject involves a significant interaction with the patient, e.g. details of a diagnostic measurement, then classification shall be directed to the appropriate subclasses of class [A61](#);
- c. the mere presence of "a computer" or "a flowchart" in relation to medical devices or procedures is not a key element for classifying in this subclass. In this case classification shall rather be directed to the appropriate subclasses covering those medical devices or procedures.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (G21D)

M G21D NUCLEAR POWER PLANT

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0422 (H01B)

M H01B CABLES; CONDUCTORS; INSULATORS; SELECTION OF MATERIALS FOR THEIR CONDUCTIVE, INSULATING OR DIELECTRIC PROPERTIES (selection for magnetic properties [H01F 1/00](#); waveguides [H01P 1/00](#); ~~installations of cables or lines H02G~~; ~~printed circuits H05K~~)

NOTE

Group [H01B 12/00](#) takes precedence over groups [H01B 5/00](#) - [H01B 11/00](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M H01B 1/00 Conductors or conductive bodies characterised by the conductive materials; Selection of materials as conductors (~~resistors H01C~~; ~~selection of materials for superconductivity H01L 39/00~~)

NOTE

Groups [H01B 1/14](#) - [H01B 1/24](#) take precedence over groups [H01B 1/02](#) - [H01B 1/12](#)

M H01B 3/00 Insulators or insulating bodies characterised by the insulating materials; Selection of materials for their insulating or dielectric properties (~~selection of piezo-electric or electrostrictive materials H01L 41/00~~)

U H01B 5/00 Non-insulated conductors or conductive bodies characterised by their form
M H01B 5/14 • comprising conductive layers or films on insulating-supports (~~insulating-layers or insulating-films on metal bodies H01B 17/62~~)

U H01B 7/00 Insulated conductors or cables characterised by their form
M H01B 7/02 • Disposition of insulation (~~materials H01B 3/00; insulators H01B 17/00~~)
M H01B 7/06 • Extensible conductors or cables, e.g. self-coiling cords (~~arrangements for storing and repeatedly paying-out and re-storing lengths of conductors or cables B65H 75/34~~)

M H01B 7/12 • Floating cables (~~installations of cables supported on or from floats H02G 9/12~~)

M	H01B 7/16	• Rigid-tube cables (heating elements of similar construction H05B)
M	H01B 7/17	• Protection against damage caused by external factors, e.g. sheaths or armouring (power cables with screens H01B 9/02; communication cables with screens H01B 11/06; {continuously-loaded cables H01B 11/14;} installation of conduits H02G)
M	H01B 7/28	• • {Protection against damage caused} by moisture, corrosion, chemical attack or weather {{sheaths, armouring H01B 7/18}}
M	H01B 7/282	• • • Preventing penetration of fluid {, e.g. water or humidity,} into conductor or cable (insulators or insulating bodies with surfaces specially treated for preserving insulating properties, e.g. for protection against moisture, dirt, or the like, H01B 17/50)
M	H01B 7/32	• with arrangements for indicating defects, e.g. breaks, leaks , or leaks (locating defects by measuring G01)
M	H01B 7/42	• with arrangements for heat dissipation or conduction (insulators or insulating bodies having heating or cooling devices H01B 17/54)
M	H01B 11/00	Communication cables or conductors (waveguides H01P)
M	H01B 11/02	• Cables with twisted pairs or quads (transposing, crossing or twisting at joints H04B; balancing of earth capacitance H04B)
M	H01B 11/04	• • with pairs or quads mutually positioned to reduce cross-talk (balancing by making use of additional capacitors or coils H04B)
M	H01B 11/06	• • with means for reducing effects of electromagnetic or electrostatic disturbances, e.g. screen screens (screening in general H05K 9/00)
M	H01B 11/12	• • Arrangements for exhibiting specific transmission characteristics (loading coils per se H01F 17/08; coil-loaded circuits H04B)
M	H01B 11/16	• • • Cables, e.g. submarine cables, with coils or other devices incorporated during cable manufacture (junction boxes for cables H02G 15/10)
M	H01B 12/00	Superconductive or hyperconductive conductors, cables, or transmission lines (details or devices using superconductivity or hyperconductivity characterised by the material H01L 39/12)
U	H01B 13/00	Apparatus or processes specially adapted for manufacturing conductors or cables
M	H01B 13/02	• Stranding-up (stranding-up ropes D07B)
U	H01B 13/22	• Sheathing; Armouring; Screening; Applying other protective layers (H01B 13/32 takes precedence)
M	H01B 13/26	• • by winding, braiding, or longitudinal lapping (winding in general B65H)
M	H01B 13/30	• Drying; (in general F26B) ; Impregnating (H01B 13/32 takes precedence; {impregnating of fibres D06B 3/00, D06B 5/00; H01G 4/00, H01G 4/06; drying and impregnating of wood or the like B27K; impregnation of stones, basic materials therefor C04B 20/10 – C04B 20/12, C04B 41/45 – C04B 41/52})
M	H01B 13/32	• Filling or coating with impervious material (for cable installations H02G 15/00)
M	H01B 17/00	Insulators or insulating bodies characterised by their form (section insulators for electric traction B60M 1/18; insulating rail-joints E01B 11/54)
U	H01B 17/02	• Suspension insulators; Strain insulators
M	H01B 17/12	• • Special features of strain insulators (devices for relieving mechanical tension of electric lines or cables H02G 7/04)
U	H01B 17/26	• Lead-in insulators; Lead-through insulators
M	H01B 17/28	• • Capacitor type (capacitors H01G)
M	H01B 17/30	• • Sealing (packings in general F16J)

- U H01B 17/42 • Means for obtaining improved distribution of voltage (capacitor-type lead-through insulators [H01B 17/28](#)); Protection against arc discharges
- M H01B 17/44 • • Structural association of insulators with corona rings (~~corona rings H01T 19/02~~)
- M H01B 17/46 • • Means for providing an external arc-discharge path (~~spark-gap arresters H01T~~)
- M H01B 17/56 • Insulating bodies (~~insulators H01B 17/02 - H01B 17/54~~)
- M H01B 17/58 • • Tubes, sleeves, beads, or bobbins through which the conductor passes (~~protective tubings for the installation of lines or cables in buildings H02G 3/04~~)
- M H01B 17/60 • • Composite insulating bodies (~~cables or conductors H01B 7/00, H01B 9/00; resistors H01C; capacitors H01G~~)
- M H01B 17/62 • • Insulating-layers or insulating-films on metal bodies (~~conductive layers or films on insulating-bodies H01B 5/14~~)
- M H01B 17/64 • • with conductive admixtures, inserts, or layers (~~conductive bodies comprising conductive material dispersed in insulating material H01B 5/16~~)
- U H01B 19/00 **Apparatus or processes specially adapted for manufacturing insulators or insulating bodies {(manufacture of porcelain for electric insulation [C04B 33/26](#))}**
- M H01B 19/02 • Drying (~~in general F26B~~); Impregnating

Project: MP0301 (H01F)

- U H01F 1/00 **Magnets or magnetic bodies characterised by the magnetic materials therefor; Selection of materials for their magnetic properties**
 - M H01F 1/0009 • {Antiferromagnetic materials, i.e. materials exhibiting a Néel transition temperature ([H01F 1/0036](#) takes precedence)}
- WARNING**
This groups is not complete pending the completion of reclassification; see provisionally also H01F 1/00 - H01F 1/447
- U H01F 1/01 • of inorganic materials ([H01F 1/44](#) takes precedence)
 - U H01F 1/03 • • characterised by their coercivity {([H01F 1/40](#) takes precedence)}
 - U H01F 1/032 • • • of hard-magnetic materials
 - U H01F 1/04 • • • • metals or alloys
 - U H01F 1/06 • • • • in the form of particles, e.g. powder ([H01F 1/047](#) takes precedence {; record carriers [G11B 5/70605](#)})
 - M H01F 1/068 • • • • • {having a L10 crystallographic structure, e.g. [Co,Fe][Pt,Pd] (nano)particles}
- WARNING**
This groups is not complete pending the completion of reclassification; see provisionally also H01F 1/06 - H01F 1/066
- U H01F 10/00 **Thin magnetic films, e.g. of one-domain structure (magnetic record carriers [G11B 5/00](#); thin-film magnetic stores [G11C](#))**
 - M H01F 10/002 • {Antiferromagnetic thin films, i.e. films exhibiting a Néel transition temperature ([H01F 10/3218](#) and [H01F 10/3268](#) take precedence)}
- WARNING**
This groups is not complete pending the completion of reclassification; see provisionally also H01F 10/00 - H01F 10/30

- U H01F 10/08
 - characterised by magnetic layers ({[H01F 10/32](#) takes precedence } ; applying thin magnetic films to substrates [H01F 41/14](#))
- U H01F 10/10
 - • characterised by the composition
- U H01F 10/12
 - • • being metals or alloys (intermetallic compounds [H01F 10/18](#))
- M H01F 10/123
 - • • • {having a L10 crystallographic structure, e.g. [Co,Fe][Pt,Pd] thin films}

WARNING

~~This groups is not complete pending the completion of reclassification; see provisionally also H01F 10/16~~

- U H01F 10/18
 - • • being compounds
- U H01F 10/193
 - • • • Magnetic semiconductor compounds {(in general [H01F 1/40](#); multilayers, e.g. superlattices [H01F 10/3213](#))}
- M H01F 10/1933
 - • • • • {Perovskites}

WARNING

~~This groups is not complete pending the completion of reclassification; see provisionally also H01F 10/193~~

- U H01F 10/26
 - characterised by the substrate or intermediate layers {([H01F 10/06](#) and [H01F 10/32](#) take precedence)}
- M H01F 10/265
 - • {Magnetic multilayers non exchange-coupled ([H01F 10/32](#) takes precedence)}

WARNING

~~This groups is not complete pending the completion of reclassification; see provisionally also H01F 10/00 - H01F 10/30~~

- U H01F 41/00

Apparatus or processes specially adapted for manufacturing or assembling magnets, inductances or transformers; Apparatus or processes specially adapted for manufacturing materials characterised by their magnetic properties
- U H01F 41/32
 - for applying conductive, insulating or magnetic material on a magnetic film {, specially adapted for a thin magnetic film}
- M H01F 41/325
 - • {applying a noble metal capping on a spin-exchange-coupled multilayer, e.g. spin filter deposition}

WARNING

~~This groups is not complete pending the completion of reclassification; see provisionally also H01F 41/32~~

Project: MP0421 (H01J)

- U H01J 1/00

Details of electrodes, of magnetic control means, of screens, or of the mounting or spacing thereof, common to two or more basic types of discharge tubes or lamps (details of electron-optical arrangements or of ion traps [H01J 3/00](#))
- U H01J 1/02
 - Main electrodes
- U H01J 1/13
 - • Solid thermionic cathodes
- U H01J 1/20
 - • • Cathodes heated indirectly by an electric current; Cathodes heated by electron or ion bombardment
- M H01J 1/22
 - • • • Heaters (~~filaments for incandescent lamps H01K 1/02~~)

- | | | |
|----------|------------------|---|
| M | H01J 1/32 | <ul style="list-style-type: none"> • Secondary-electron-emitting electrodes (H01J 1/35 takes precedence; luminescent screens H01J 1/62; charge storage screens in general H01J 1/78; charge storage screens using secondary emission for image tubes H01J 29/41; dynodes for secondary emission tubes H01J 43/10; secondary-emission detectors for measurement of nuclear or X-radiation G01T 1/28) |
| M | H01J 1/34 | <ul style="list-style-type: none"> • Photo-emissive cathodes (H01J 1/35 takes precedence; photoelectric screens H01J 1/78) |
| M | H01J 1/52 | <ul style="list-style-type: none"> • Screens for shielding (screens acting as control electrodes H01J 1/46); Guides for influencing the discharge; Masks interposed in the electron stream |
| U | H01J 1/54 | <ul style="list-style-type: none"> • Screens on or from which an image or pattern is formed, picked up, converted, or stored; Luminescent coatings on vessels {(see provisionally also H01J 29/08 - H01J 29/36)} |
| U | H01J 1/62 | <ul style="list-style-type: none"> • Luminescent screens; Selection of materials for luminescent coatings on vessels {(see provisionally also H01J 29/08 - H01J 29/36)} |
| M | H01J 1/63 | <ul style="list-style-type: none"> • characterised by the luminescent material (luminescent materials or compositions C09K 11/00 {see provisionally also H01J 29/08 - H01J 29/36}) |
| M | H01J 1/66 | <ul style="list-style-type: none"> • Supports for luminescent material (vessels H01J 5/02 {see provisionally also H01J 29/08 - H01J 29/36}) |
| U | H01J 1/88 | <ul style="list-style-type: none"> • Mounting, supporting, spacing, or insulating of electrodes or of electrode assemblies |
| M | H01J 1/90 | <ul style="list-style-type: none"> • Insulation between electrodes or supports within the vacuum space (leading-in conductors H01J 5/46) |
| M | H01J 1/94 | <ul style="list-style-type: none"> • Mountings for individual electrodes (for directly-heated cathodes H01J 1/15) |
| U | H01J 3/00 | Details of electron-optical or ion-optical arrangements or of ion traps common to two or more basic types of discharge tubes or lamps |
| M | H01J 3/26 | <ul style="list-style-type: none"> • Arrangements for deflecting ray or beam {(circuit arrangements for producing saw-tooth pulses or other deflecting voltages or currents H03K; (H01J 29/46 - H01J 29/84 and H01J 37/147 take precedence))} |
| U | H01J 5/00 | Details relating to vessels or to leading-in conductors common to two or more basic types of discharge tubes or lamps |
| U | H01J 5/02 | <ul style="list-style-type: none"> • Vessels; Containers; Shields associated therewith; Vacuum locks |
| M | H01J 5/04 | <ul style="list-style-type: none"> • Vessels or containers characterised by the material thereof (selection of the material of the coating H01J 5/08) |
| M | H01J 5/16 | <ul style="list-style-type: none"> • Optical or photographic arrangements structurally combined with the vessel (luminescent coatings H01J 1/62 {see provisionally H01J 29/84}) |
| M | H01J 5/48 | <ul style="list-style-type: none"> • Means forming part of the tube or lamp for the purpose of supporting it (associated with electrical connecting means H01J 5/50) |
| M | H01J 5/50 | <ul style="list-style-type: none"> • Means forming part of the tube or lamps for the purpose of providing electrical connection to it (construction of connectors H01R) |
| U | H01J 7/00 | Details not provided for in the preceding groups and common to two or more basic types of discharge tubes or lamps |
| M | H01J 7/02 | <ul style="list-style-type: none"> • Selection of substances for gas fillings; Specified operating pressure or temperature (radioactive fillings H01J 7/40) |
| M | H01J 7/24 | <ul style="list-style-type: none"> • Cooling arrangements (for main electrodes H01J 1/02); Heating arrangements (for main electrodes H01J 1/02); Means for circulating gas or vapour within the discharge space |
| M | H01J 7/30 | <ul style="list-style-type: none"> • Igniting arrangements (circuit arrangements H02M 1/02, H05B) |

- M H01J 9/00** Apparatus or processes specially adapted for the manufacture, { ~~for~~ installation, removal, maintenance} of electric discharge tubes, discharge lamps, or parts thereof ~~(manufacture of vessels or containers from metal B21, e.g. B21D 51/00, from glass C03B)~~; Recovery of material from discharge tubes or lamps
- M H01J 9/236** • Manufacture of magnetic deflecting devices for cathode-ray tubes ~~(manufacturing coils for transformers, inductances, reactors or choke coils H01F 41/04)~~
- M H01J 11/00** Gas-filled discharge tubes with alternating current induction of the discharge, e.g. AC-PDPs [Alternating Current Plasma Display Panels] (circuits or methods for driving PDPs [G09G 3/28](#)); Gas-filled discharge tubes without any main electrode inside the vessel; Gas-filled discharge tubes with at least one main electrode outside the vessel ~~(discharge lamps H01J 65/00 {H01J 61/00, H01J 63/00})~~
- NOTES**
1. When classifying in this group, classification is made in all appropriate places.
 2. In this group, the following term is used with the meaning indicated:
 - "main electrode" means any of a sustain electrode, scan electrode or address electrode.
- M H01J 13/00** Discharge tubes with liquid-pool cathodes, e.g. metal-vapour rectifying tubes ~~(lamps H01J 61/00)~~
- U H01J 13/02** • Details
- U H01J 13/04** • • Main electrodes; Auxiliary anodes
- M H01J 13/16** • • • Anodes; Auxiliary anodes for maintaining the discharge ~~(screens H01J 13/22)~~
- M H01J 13/34** • • Igniting arrangements ~~(circuits arrangements H02M 1/02)~~
- M H01J 13/44** • • Devices for preventing or eliminating arcing-back ~~(screens therefor H01J 13/22)~~
- M H01J 15/00** Gas-filled discharge tubes with gaseous cathodes, e.g. plasma cathode ~~(lamps H01J 61/62)~~
- M H01J 17/00** Gas-filled discharge tubes with solid cathode ([H01J 25/00](#), [H01J 27/00](#), [H01J 31/00](#) - [H01J 41/00](#) { [H01J 11/00](#) } take precedence; ~~gas or vapour discharge lamps H01J 61/00~~; gas filled spark gaps [H01T](#); Marx converters [H02M 7/26](#); ~~tubes for generating potential differences by charges carried in a gas stream H02N~~)
- U H01J 17/02** • Details
- M H01J 17/20** • • Selection of substances for gas fillings; Specified operating pressures or ~~temperature~~ ~~temperatures~~ ~~(radioactive fillings H01J 17/32)~~
- M H01J 17/38** • Cold-cathode tubes ~~(TR boxes H01J 17/64)~~
- U H01J 17/48** • • with more than one cathode or anode, e.g. sequence-discharge tube, counting tube, dekatron
- M H01J 17/49** • • • Display panels, e.g. with crossed electrodes {, e.g. making use of direct current} ~~(gas discharge type indicating arrangements effected by the combination of a number of individual lamps G09F 9/313 {display panels making use of alternating current H01J 11/00} display panels making use of alternating current H01J 11/00)}~~
- M H01J 17/50** • Thermionic-cathode tubes ~~(TR boxes H01J 17/64)~~
- U H01J 19/00** Details of vacuum tubes of the types covered by group [H01J 21/00](#)
- U H01J 19/02** • Electron-emitting electrodes; Cathodes

U	H01J 19/04	• • Thermionic cathodes
U	H01J 19/14	• • • Cathodes heated indirectly by an electric current; Cathodes heated by electron or ion bombardment
M	H01J 19/16	• • • Heaters (filaments for incandescent lamps H01K 1/02)
U	H01J 19/28	• Non-electron-emitting electrodes; Screens
M	H01J 19/40	• • Screens for shielding (screens acting as control electrodes H01J 19/38)
U	H01J 19/42	• Mounting, supporting, spacing, or insulating of electrodes or of electrode assemblies
M	H01J 19/44	• • Insulation between electrodes or supports within the vacuum space (leading-in conductors H01J 19/62)
M	H01J 19/48	• • Mountings for individual electrodes (for directly-heated cathodes H01J 19/12)
M	H01J 19/64	• Means forming part of the tube for the purpose supporting it (associated with electrical connecting means H01J 19/66)
M	H01J 21/00	Vacuum tubes (H01J 25/00, H01J 31/00 - H01J 37/00H01J 40/00, H01J 43/00, H01J 47/00, H01J 49/00 take precedence; details of vacuum tubes H01J 19/00; cathode ray or electron stream lamps H01J 63/00)
M	H01J 21/20	• Tubes with more than one discharge path; Multiple tubes, e.g. double diode, triode-hexode (secondary-emission tubes; electron-multiplier tubes H01J 43/00)
U	H01J 23/00	Details of transit-time tubes of the types covered by group H01J 25/00
M	H01J 23/16	• Circuit elements, having distributed capacitance and inductance, structurally associated with the tube and interacting with the discharge (circuit elements; having distributed capacitance and inductance, in general H01P)
U	H01J 25/00	Transit-time tubes, e.g. klystrons, travelling-wave tubes, magnetrons (details of transit-time tubes H01J 23/00; particle accelerators H05H)
M	H01J 25/02	• Tubes with electron stream modulated in velocity or density in a modulator zone and thereafter giving up energy in an inducing zone, the zones being associated with one or more resonators (tubes in which a travelling-wave is simulated at spaced gaps H01J 25/34)
U	H01J 25/50	• Magnetrons, i.e. tubes with a magnet system producing an H-field crossing the E-field (with travelling wave not moving completely around the electron space H01J 25/42 ; functioning with plural reflection or with reversed cyclotron action H01J 25/62 , H01J 25/64)
U	H01J 25/52	• • with an electron space having a shape that does not prevent any electron from moving completely around the cathode or guide electrode
M	H01J 25/54	• • • having only one cavity or other resonator, e.g. neutrode tube tubes (having a composite resonator H01J 25/58)
M	H01J 25/74	• Tubes specially designed to act as transit-time diode oscillators, e.g. monotron monotrons (with secondary emission H01J 25/76)
U	H01J 27/00	Ion beam tubes (H01J 25/00, H01J 33/00, H01J 37/00 take precedence; particle accelerators H05H)
M	H01J 27/02	• Ion sources; Ion guns {(for examination or processing discharge tubes H01J 37/08; ion sources, ion guns for particle spectrometer or separator tubes H01J 49/10; ion propulsion F03H 1/00); arrangements for handling particles; e.g. focusing, {charge exchanging, polarising}, G21K 1/00; generating ions to be introduced into non-enclosed gases H01T 23/00; generating plasma H05H 1/24)}
U	H01J 29/00	Details of cathode-ray tubes or of electron-beam tubes of the types covered by group H01J 31/00
U	H01J 29/02	• Electrodes; Screens; Mounting, supporting, spacing or insulating thereof

- M H01J 29/04
 - Cathodes ~~(electron guns H01J 29/48)~~
- M H01J 29/08
 - Electrodes intimately associated with a screen on or from which an image or pattern is formed, picked-up, converted, or stored, e.g. backing-plates for storage tube, ~~for tubes or~~ collecting secondary electrons ~~(arrangements for colour switching H01J 29/80)~~
- U H01J 29/46
 - Arrangements of electrodes and associated parts for generating or controlling the ray or beam, e.g. electron-optical arrangement {(transit time tubes [H01J 23/00](#), [H01J 25/00](#); X-ray tubes [H01J 35/00](#); beam tubes for examining ions, e.g. electron or ion microscopes, or processing of objects or materials, e.g. electron or ion beam tubes [H01J 37/04](#); electron multipliers [H01J 43/04](#); handling of radiation or particles, e.g. focusing, deviating, not otherwise provided for [G21K 1/00](#))}
- M H01J 29/70
 - Arrangements for deflecting ray or beam {(H01J 29/467, [H01J 29/525](#); [H01J 29/701](#), [H01J 29/708](#) take precedence } ; circuit arrangements for producing saw-tooth pulses or other deflecting voltages or currents [H03K](#))}
- U H01J 29/80
 - Arrangements for controlling the ray or beam after passing the main deflection system, e.g. for post-acceleration or post-concentration, for colour switching {(H01J 29/701 takes precedence)}
- M H01J 29/81
 - using shadow masks ~~(shadow masks per se H01J 29/07)~~
- M H01J 29/84
 - Traps for removing or diverting unwanted particles, e.g. negative ions, fringing electrons; Arrangements for velocity or mass selection ~~(particle spectrometer or separator tubes H01J 49/00)~~
- U H01J 29/86
 - Vessels; Containers; Vacuum locks
- M H01J 29/88
 - provided with coatings on the walls thereof; Selection of materials for the coatings {(H01J 29/868 and [H01J 29/89](#) take precedence } ; ~~luminescent screens H01J 29/18~~)}
- M H01J 29/92
 - Means forming part of the tube for the purpose of providing electrical connection to it ~~(construction of connectors H01R)~~
- M H01J 31/00

Cathode ray tubes; Electron beam tubes ([H01J 25/00](#), [H01J 33/00](#), [H01J 35/00](#), [H01J 37/00](#) take precedence; ~~cathode ray or electron stream lamps H01J 63/00~~; details of cathode ray tubes or of electron beam tubes [H01J 29/00](#))
- M H01J 37/00

Discharge tubes with provision for introducing objects or material to be exposed to the discharge, e.g. for the purpose of examination or processing thereof ([H01J 33/00](#), [H01J 40/00](#), [H01J 41/00](#), [H01J 47/00](#), [H01J 49/00](#) take precedence; ~~scanning-probe techniques or apparatus G01Q~~; ~~contactless testing of electronic circuits using electron beams G01R 31/305~~; ~~particle accelerators H05H~~)
- U H01J 37/02
 - Details
- U H01J 37/04
 - Arrangements of electrodes and associated parts for generating or controlling the discharge, e.g. electron-optical arrangement, ion-optical arrangement {(electron or ion-optical systems for localised treatment of materials [H01J 37/3007](#); discharge control means in gas filled discharge tubes [H01J 37/32009](#))}
- M H01J 37/147
 - Arrangements for directing or deflecting the discharge along a desired path {(H01J 37/045 takes precedence } ~~take precedence~~; lenses [H01J 37/10](#))}
- M H01J 37/20
 - Means for supporting or positioning the objects or the material; Means for adjusting diaphragms or lenses associated with the support {(introducing the objects [H01J 37/18](#); ~~preparing specimens for investigation G01N 1/06~~; [G01N 1/28](#))}
- M H01J 37/244
 - Detectors; Associated components or circuits therefor ~~(detectors per se G01T)~~

- M H01J 37/248
- Components associated with high voltage supply ~~{{(Means means for measuring the high voltage per se G01R 15/00); high-voltage-supply per se H02J, H02M}}~~
- M H01J 37/252
- Tubes for spot-analysing by electron or ion beams; Microanalysers ~~(investigating or analysing thereby G01N 23/22)~~
- U H01J 37/26
- Electron or ion microscopes; Electron or ion diffraction tubes
- M H01J 37/28
- with scanning beams ~~{{(H01J 37/268, H01J 37/292, H01J 37/295 take precedence); microanalysers using scanning beams H01J 37/256}}~~
- M H01J 40/00**
- Photoelectric discharge tubes not involving the ionisation of a gas (H01J 49/00 takes precedence; ~~cathode-ray or image-pick-up tubes H01J 31/26~~)**
- U H01J 40/16
- having photo- emissive cathode, e.g. alkaline photoelectric cell (operating with secondary emission H01J 43/00)
- M H01J 40/18
- with luminescent coatings for influencing the sensitivity of the tube, e.g. by converting the input wavelength ~~(image-conversion or image-amplification tubes H01J 31/50)~~
- M H01J 43/00**
- Secondary-emission tubes; Electron-multiplier tubes (dynamic electron-multiplier tubes H01J 25/76; ~~secondary-emission detectors for measurement of nuclear or X-radiation G01T 1/28~~)**
- U H01J 43/04
- Electron multipliers {{(if forming part of electron gun H01J 3/023)}}
- U H01J 43/06
- Electrode arrangements
- M H01J 43/10
- Dynodes (H01J 43/24, H01J 43/26 take precedence; ~~secondary-electron-emitting electrodes in general H01J 1/32~~)
- U H01J 49/00**
- Particle spectrometers or separator tubes**
- NOTE
- In classifying particle separators, no distinction is made between spectrometry and spectrography, the difference being only in the manner of detection which in the first case is electrical and in the second case is by means of a photographic film.
- M H01J 49/26
- Mass spectrometers or separator tubes ~~(isotope separation using these tubes B01D 59/44)~~
- M H01J 61/00**
- Gas-~~discharge~~ or vapour-discharge lamps (use for sterilising milk products A23C; use for medical purposes A61N 5/00; use for disinfecting water G02F; use for lighting F21; {use for advertising G09F}; circuits therefor H05B; arc lamps with consumable electrodes H05B; electroluminescent lamps H05B)**
- U H01J 61/02
- Details
- U H01J 61/38
- Devices for influencing the colour or wavelength of the light
- U H01J 61/42
- by transforming the wavelength of the light by luminescence
- M H01J 61/44
- Devices characterised by the luminescent material ~~(luminescent materials G09K 11/00)~~
- M H01J 61/54
- Igniting arrangements, e.g. promoting ionisation for starting ~~(circuit arrangements H05B)~~
- M H01J 61/64
- Cathode glow lamps ~~(designed as tuning or voltage indicators H01J 17/40)~~
- M H01J 63/00**
- Cathode-ray or electron-stream lamps (flying-spot tubes H01J 31/10; magic-eye tuning indicators H01J 31/14; lamps with incandescent body heated by the ray or stream H01K {see also H01J 29/00})**

Project: MP0301 (H01L)

- U H01L 21/00** Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof {(testing or measuring during manufacture or treatment, or reliability measurements [H01L 22/00](#); multistep manufacturing processes for passive two-terminal components without a potential-jump or surface barrier for integrated circuits [H01L 28/00](#); } processes or apparatus peculiar to the manufacture or treatment of devices provided for in groups [H01L 31/00](#) - [H01L 51/00](#) or of parts thereof, see these groups; single-step processes covered by other subclasses, see the relevant subclasses, e.g. [C23C](#), [C30B](#); photomechanical production of textured or patterned surfaces, materials or originals therefor, apparatus specially adapted therefor, in general [G03F](#))
- U H01L 21/02** • Manufacture or treatment of semiconductor devices or of parts thereof
- U H01L 21/04** • • the devices having at least one potential-jump barrier or surface barrier, e.g. PN junction, depletion layer or carrier concentration layer {(multistep manufacturing processes for semiconductor bodies of said devices [H01L 29/02](#); multistep manufacturing processes for electrodes of said devices [H01L 29/401](#); multistep manufacturing processes for said devices [H01L 29/66007](#))}
- M H01L 21/06** • • the devices having semiconductor bodies comprising selenium or tellurium in uncombined form other than as impurities in semiconductor bodies of other materials
- WARNING**
 Group H01L 21/06 is impacted by reclassification into groups H01L 21/02365 – H01L 21/02694.
 Groups H01L 21/06 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.
- M H01L 21/16** • • the devices having semiconductor bodies comprising cuprous oxide or cuprous iodide
- WARNING**
 Group H01L 21/16 is impacted by reclassification into groups H01L 21/02365 – H01L 21/02694.
 Groups H01L 21/16 and H01L 21/02365 – H01L 21/02694 should be considered in order to perform a complete search.
- U H01L 21/18** • • the devices having semiconductor bodies comprising elements of Group IV of the Periodic System or $A_{III}B_V$ compounds with or without impurities, e.g. doping materials {([H01L 21/041](#) - [H01L 21/0425](#), [H01L 21/045](#) - [H01L 21/048](#) take precedence)}
- NOTE**
 This group covers also processes and apparatus which, by using the appropriate technology, are clearly suitable for manufacture or treatment of devices whose bodies comprise elements of Group IV of the Periodic System or $A_{III}B_V$ compounds, even if the material used is not explicitly specified.
- U H01L 21/26** • • • Bombardment with radiation {([H01L 21/3105](#) takes precedence)}
- U H01L 21/263** • • • • with high-energy radiation ([H01L 21/261](#) takes precedence)

- M H01L 21/265 producing ion implantation (ion beam tubes for localised treatment [H01J 37/30](#))

WARNING

Groups H01L 21/26566, H01L 21/2658 and H01L 21/26593 are incomplete pending reclassification of documents from groups H01L 21/26506 and H01L 21/2654.

Groups H01L 21/26566, H01L 21/2658, H01L 21/26593, H01L 21/26506 and H01L 21/2654 should be considered in order to perform a complete search.

Project: RP0352 (H01L)

- M H01L 33/00 Semiconductor devices with at least one potential-jump barrier or surface barrier specially adapted for light emission; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof; Details thereof ([H01L 51/50](#) takes precedence; devices consisting of a plurality of semiconductor components formed in or on a common substrate and including semiconductor components with at least one potential-jump barrier or surface barrier, specially adapted for light emission [H01L 27/15](#); semiconductor lasers [H01S 5/00](#))

NOTE

1. This group covers light emitting diodes [LEDs] or superluminescent diodes [SLDs], including LEDs or SLDs emitting infra-red [IR] light or ultra-violet [UV] light.

2. In this group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

- U H01L 33/005 . {Processes}
- U H01L 33/0062 . . {for devices with an active region comprising only III-V compounds}
- D H01L 33/0079 . . . {wafer bonding or at least partial removal of the growth substrate}
- <administratively transferred to [H01L 33/0093](#)>
- U H01L 33/0091 . . {for devices with an active region comprising only IV-VI compounds}
- N H01L 33/0093 . . {Wafer bonding; Removal of the growth substrate}
- M H01L 33/0095 . . {Post-treatments of the treatment of devices, e.g. annealing, recrystallisation, or short-circuit elimination}
- U H01L 2933/00 Details relating to devices covered by the group [H01L 33/00](#) but not provided for in its subgroups**
- U H01L 2933/0008 . Processes
- U H01L 2933/0033 . . relating to semiconductor body packages
- M H01L 2933/0041 . . relating to wavelength conversion elements
- M H01L 2933/005 . . relating to encapsulations
- M H01L 2933/0058 . . relating to optical field-shaping elements
- M H01L 2933/0066 . . relating to arrangements for conducting electric current to or from the semiconductor body
- M H01L 2933/0075 . . relating to heat extraction or cooling elements

Project: N/A (H01S)

- U H01S 3/00 Lasers, i.e. devices using stimulated emission of electromagnetic radiation in the infrared, visible or ultraviolet wave range (semiconductors lasers [H01S 5/00](#))

- U H01S 3/05 · Construction or shape of optical resonators; Accommodation of active medium therein; Shape of active medium
- U H01S 3/08 · · Construction or shape of optical resonators or components thereof
{(waveguide lasers [H01S 3/063](#))}
- U H01S 3/081 · · · comprising more than two reflectors {(folded-path gas lasers [H01S 3/076](#))}
- U H01S 3/0813 · · · · {Configuration of resonator}
- H01S 3/0815 · · · · · {having 3 reflectors, [i.e.g.](#) V-shaped resonators}
- H01S 3/0816 · · · · · {having 4 reflectors, [i.e.g.](#) Z-shaped resonators}
- H01S 3/0817 · · · · · {having 5 reflectors, [i.e.g.](#) W-shaped resonators}
- U H01S 5/00 Semiconductor lasers (superluminescent diodes {[H01L 33/0045](#)})**
- NOTE**
- Attention is drawn to Special Rules of classification at [C07F](#), which Special Rules indicate to which version of the periodic table of chemical elements CPC refers. In this group, the Periodic System used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.
- U H01S 5/02 · Structural details or components not essential to laser action
- U H01S 5/024 · · Cooling arrangements {([H01S 5/0261](#) takes precedence)}
- H01S 5/02438 · · · {Characterized by cooling of elements other than the laser [chip](#), e.g. an optical element being part of an external cavity or a collimating lens}
- H01S 5/02446 · · · · {Cooling being separate from the laser [chip](#) cooling}
- U H01S 5/04 · Processes or apparatus for excitation, e.g. pumping, {e.g. by electron beams} ([H01S 5/06](#) takes precedence)
- H01S 5/042 · · Electrical excitation {; Circuits therefor (~~discrete or monolithically integrated laser drive components on mountings~~ [H01S 5/0261](#) [monolithically integrated laser drive components](#) [H01S 5/0261](#))}
- U H01S 5/06 · Arrangements for controlling the laser output parameters, e.g. by operating on the active medium
- U H01S 5/0607 · · {by varying physical parameters other than the potential of the electrodes, e.g. by an electric or magnetic field, mechanical deformation, pressure, light, temperature}
- U H01S 5/0608 · · · {controlled by light, e.g. optical switch}
- U H01S 5/0609 · · · · {acting on an absorbing region, e.g. wavelength convertors}
- H01S 5/0611 · · · · · {wavelength ~~convectors~~[convertors](#)}

Project: RP0386-C (H02J)

- U H02J 7/00 Circuit arrangements for charging or depolarising batteries or for supplying loads from batteries**

WARNING

Group [H02J 7/00](#) is incomplete pending reclassification of documents from groups [H02J 7/0077](#), [H02J 7/0085](#), [H02J 7/0088](#), and [H02J 7/025](#).

Groups [H02J 7/00](#), [H02J 7/0077](#), [H02J 7/0085](#), [H02J 7/0088](#), and [H02J 7/025](#) should be considered in order to perform a complete search.

- U H02J 7/007 · {Regulation of charging or discharging current or voltage}

WARNING

Group [H02J 7/007](#) is incomplete pending reclassification of documents from groups [H02J 7/0063](#), [H02J 2007/0067](#), [H02J 7/042](#), [H02J 2007/10](#), and [H02J 7/125](#).

Group [H02J 7/007](#) is also impacted by reclassification into groups [H02J 7/00712](#) and [H02J 7/007188](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U H02J 7/007188
 - {the charge cycle being controlled or terminated in response to non-electric parameters}

WARNING

Group [H02J 7/007188](#) is incomplete pending reclassification of documents from groups [H02J 7/0063](#), [H02J 2007/0067](#), [H02J 7/007](#), [H02J 7/0072](#), [H02J 7/0088](#), [H02J 7/042](#), [H02J 7/087](#), [H02J 2007/10](#), and [H02J 7/125](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M H02J 7/007192
 - • • {in response to temperature}

WARNING

Group [H02J 7/007192](#) is incomplete pending reclassification of documents from groups [H02J 7/0063](#), [H02J 2007/0067](#), [H02J 7/0072](#), [H02J 7/0091](#), [H02J 7/042](#), [H02J 7/087](#), [H02J 2007/10](#), and [H02J 7/125](#).

Group [H02J 7/007192](#) is also impacted by reclassification into group [H02J 7/007194](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M H02J 7/007194
 - • • • {of the battery}

WARNING

Group [H02J 7/007194](#) is incomplete pending reclassification of documents from groups [H02J 7/0063](#), [H02J 2007/0067](#), [H02J 7/007192](#), [H02J 7/0072](#), [H02J 7/0091](#), [H02J 7/042](#), [H02J 7/087](#), [H02J 2007/10](#), and [H02J 7/125](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0312-F (H02J)

- M H02J 17/00
(Frozen)
 - Systems for supplying or distributing electric power by electromagnetic waves**

WARNING

Group H02J-17/00 is no longer used for the classification of documents as of February 1, 2016. The content of this group is being reclassified into groups H02J 50/00 — H02J 50/90.

Groups H02J-17/00 and H02J 50/00 — H02J 50/90 should be considered in order to perform a complete search.

Project: RP0300-F (H02K)

- U H02K 11/00
 - Structural association of dynamo-electric machines with electric components or with devices for shielding, monitoring or protection (casings, enclosures or supports [H02K 5/00](#))**

- U H02K 11/02
 - for suppression of electromagnetic interference

- U H02K 11/022
 - • {Shields}

- D H02K 11/024
 - • • {Suppressors}

—(Frozen)

WARNING

Group H02K 11/024 is no longer used for the classification of documents as of January 1, 2016. The content of this group is being reclassified into groups H02K 11/026 and H02K 11/028.

H02K 11/024

(Frozen)

(continued)

Groups H02K 11/024, H02K 11/026, and H02K 11/028 should be considered in order to perform a complete search.

M H02K 11/026

- Suppressors associated with brushes, brush holders or their supports

WARNING

Group H02K 11/026 is incomplete pending reclassification of documents from group H02K 11/024.

Groups H02K 11/026 and H02K 11/024 should be considered in order to perform a complete search.

M H02K 11/028

- Suppressors associated with the rotor

WARNING

Group H02K 11/028 is incomplete pending reclassification of documents from group H02K 11/024.

Groups H02K 11/028 and H02K 11/024 should be considered in order to perform a complete search.

M H02K 11/04

- for rectification

WARNING

Group H02K 11/04 is impacted by reclassification into groups H02K 11/049 and H02K 11/05.

Groups H02K 11/04, H02K 11/049, and H02K 11/05 should be considered in order to perform a complete search.

M H02K 11/049

- Rectifiers associated with stationary parts, e.g. stator cores

WARNING

Group H02K 11/049 is incomplete pending reclassification of documents from group H02K 11/04.

Groups H02K 11/049 and H02K 11/04 should be considered in order to perform a complete search.

M H02K 11/05

- Rectifiers associated with casings, enclosures or brackets

WARNING

Group H02K 11/05 is incomplete pending reclassification of documents from group H02K 11/04.

Groups H02K 11/05 and H02K 11/04 should be considered in order to perform a complete search.

Project: MP0439 (H03C)

M H03C

MODULATION (measuring, testing [G01R](#); masers, lasers [H01S](#); modulators specially adapted for use in the amplifiers [H03F 3/38](#); modulating pulses [H03K 7/00](#); so-called modulators capable only of a switching between predetermined states of amplitude, frequency or phase [H03K 17/00](#), [H04L](#); coding, decoding or code conversion, in general [H03M](#); synchronous modulators specially adapted for colour television [H04N 9/65](#))

NOTES

1. This subclass covers only modulation, keying, or interruption of sinusoidal oscillations or electromagnetic waves, the modulating signal having any desired waveform.
2. In this subclass, circuits usable both as modulator and demodulator are classified in the group dealing with the type of modulator involved.

WARNING

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

H03C 1/38 - H03C 1/44 covered by [H03C 1/36](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0439 (H03D)

M H03D

DEMODULATION OR TRANSFERENCE OF MODULATION FROM ONE CARRIER TO ANOTHER (masers, lasers [H01S](#); circuits capable of acting both as modulator and demodulator [H03C](#); details applicable to both modulators and frequency-changers [H03C](#); demodulating pulses [H03K 9/00](#); transforming types of pulse modulation [H03K 11/00](#); coding, decoding or code conversion, in general [H03M](#); repeater stations [H04B 7/14](#); demodulators adapted for ac systems of digital information transmission [H04L 27/00](#); synchronous demodulators adapted for colour television [H04N 9/66](#))

NOTE

This subclass covers only:

- demodulation or transference of signals modulated on a sinusoidal carrier or on electromagnetic waves;
- comparing phase or frequency of two mutually-independent oscillations.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0301 (H03H)

U H03H 11/00

Networks using active elements

U H03H 11/02

• Multiple-port networks

U H03H 11/04

• • Frequency selective two-port networks

U H03H 11/12

• • • using amplifiers with feedback ({[H03H 11/0422](#)} , [H03H 11/08](#), [H03H 11/10](#) take precedence)

U H03H 11/1217

• • • • {using a plurality of operational amplifiers ([H03H 11/1204](#) takes precedence; parallel-T filters [H03H 11/1295](#))}

U H03H 11/1243

• • • • {Simulation of ladder networks}

M H03H 11/1247

• • • • • {Leapfrog structures}

WARNING

~~Not complete, pending reorganisation, see provisionally also H03H 11/1217 – H03H 11/1252~~

U H03H 11/1252

• • • • • {Two integrator-loop-filters}

M H03H 11/1256

• • • • • {Tow-Thomas biquad}

WARNING

~~Not complete, pending reorganisation, see provisionally also H03H 11/1217 – H03H 11/1252~~

U H03H 11/126

• • • • {using a single operational amplifier ([H03H 11/1204](#) takes precedence; parallel-T filters [H03H 11/1295](#))}

M H03H 11/1286

• • • • • {Sallen-Key biquad}

WARNING

~~Not complete, pending reorganisation, see provisionally also H03H 11/126 – H03H 11/1282~~

U	H03H 11/46	• One-port networks
U	H03H 11/48	• • simulating reactances
M	H03H 11/481	• • • {Simulating capacitances}
		WARNING Not complete, pending reorganisation, see provisionally also H03H 11/48 - H03H 11/52
M	H03H 11/483	• • • {Simulating capacitance multipliers}
		WARNING Not complete, pending reorganisation, see provisionally also H03H 11/48 - H03H 11/52
M	H03H 11/485	• • • {Simulating inductances using operational amplifiers}
		WARNING Not complete, pending reorganisation, see provisionally also H03H 11/48 - H03H 11/52
M	H03H 11/486	• • • {Simulating inductances using transconductance amplifiers}
		WARNING Not complete, pending reorganisation, see provisionally also H03H 11/48 - H03H 11/52
M	H03H 11/488	• • • {Simulating inductances using current conveyors}
		WARNING Not complete, pending reorganisation, see provisionally also H03H 11/48 - H03H 11/52
U	H03H 11/52	• • simulating negative resistances
M	H03H 11/525	• • • {Simulating frequency dependent negative resistance [FDNR]}
		WARNING Not complete, pending reorganisation, see provisionally also H03H 11/52
M	H03H 11/53	• • {simulating resistances; simulating resistance multipliers}
		WARNING Not complete, pending reorganisation, see provisionally also H03H 11/48 - H03H 11/52

Project: RP0121 (H04B)

M	H04B 10/00	Transmission systems employing electromagnetic waves other than radio-waves, e.g. infrared, visible or ultraviolet light, or employing corpuscular radiation, e.g. quantum communication
		<u>NOTE</u> Groups <i>in</i> H04B 10/03 <i>this group</i> , H04B 10/07, <i>non-optical</i> H04B 10/11, <i>transmission</i> H04B 10/25, <i>systems</i> H04B 10/27, <i>are</i> H04B 10/29 and <i>classified in</i> H04B 10/40 - <i>group</i> H04B 10/90, and their subgroups are based on IPC2013.01.

Project: RP0121, MP0301 (H04B)

- M H04B 10/03 • Arrangements for fault recovery

WARNING

This group and its subgroups are not complete pending reclassification; see also H04B 10/07 and subgroups H04B 10/071 - H04B 10/0799

Project: RP0121 (H04B)

- U H04B 10/07 • Arrangements for monitoring or testing transmission systems; Arrangements for fault measurement of transmission systems

- D H04B 10/0705 • • {Prevention or detection of unauthorized access, e.g. tapping}
 <administratively transferred to [H04B 10/85](#)>

- D H04B 10/12 • {Transmission through light guides, e.g. optical fibres (H04B 10/25 takes precedence)}

WARNING

This group and its subgroups is no longer used for classification of new documents as from March 1, 2012. If not indicated differently for a particular subgroup, the backlog of its subgroups is being continuously reclassified to H04B 10/25 - H04B 10/2587

<administratively transferred to [H04B 10/25](#)>

- D H04B 10/14 • • {Terminal stations}

WARNING

This group and its subgroups is no longer used for classification of new documents as from March 1, 2012. The backlog of this group and its subgroups is being continuously reclassified to H04B 10/40 - H04B 10/69

<administratively transferred to [H04B 10/40](#)>

- D H04B 10/142 • • • {Coherent homodyne or heterodyne systems}
 <administratively transferred to [H04B 10/40](#), [H04B 10/50](#), and [H04B 10/60](#) simultaneously>

- D H04B 10/152 • • • {Non-coherent direct detection systems}
 <administratively transferred to [H04B 10/40](#), [H04B 10/50](#), and [H04B 10/60](#) simultaneously>

- D H04B 10/22 • {Transmission between two stations which are mobile relative to each other}

WARNING

This group and its subgroup is no longer used for classification of new documents as from March 1, 2012. The backlog of this group and its subgroup is being continuously reclassified to H04B 10/25 - H04B 10/2587 and H04B 10/70

<administratively transferred to [H04B 10/11](#)>

- D H04B 10/225 • • {using optical fibre links}
 <administratively transferred to [H04B 10/25](#)>

- T H04B 10/25 • Arrangements specific to fibre transmission-~~{(optical fibres per se, structural details of arrangements comprising optical fibres or other optical elements G02B 6/00)}~~

WARNING

This group and its subgroups are not complete pending reclassification; see also H04B 10/12 and its subgroups

- D H04B 10/2503
 - • {Bidirectional transmission}
 - <administratively transferred to [H04B 10/2589](#)>
- D H04B 10/2504
 - • {Transmission components (~~H04B 10/40 takes precedence~~)}
 - <administratively transferred to [H04B 10/25891](#)>
- U H04B 10/2507
 - • for the reduction or elimination of distortion or dispersion
- U H04B 10/2513
 - • • due to chromatic dispersion
- M H04B 10/25133
 - • • • {including a lumped electrical or optical dispersion compensator ([H04B 10/2519](#), [H04B 10/2525](#) ~~take~~^{takes} precedence)}; ~~optical dispersion compensators involving optical fibres per se G02B 6/293~~
- M H04B 10/2519
 - • • • using Bragg gratings ~~{(Bragg gratings per se G02B 6/02076; devices using fibre gratings for dispersion control per se G02B 6/29316)}~~
- M H04B 10/2525
 - • • • using dispersion-compensating fibres ~~{(dispersion-tailored or dispersion compensation fibres per se G02B 6/02214)}~~
- M H04B 10/25253
 - • • • • {with dispersion management, i.e. using a combination of different kind of fibres in the transmission system ~~(devices with different kinds of fibres for dispersion control per se G02B 6/29374)~~}
- M H04B 10/2543
 - • • due to fibre non-linearities, e.g. Kerr effect ~~{(non-linear optical devices G02F 1/35)}~~
- U H04B 10/2575
 - • Radio-over-fibre, e.g. radio frequency signal modulated onto an optical carrier {(sub-carrier multiplexing [H04J 14/0298](#))}
- U H04B 10/25752
 - • • {Optical arrangements for wireless networks}
- M H04B 10/25753
 - • • • {Distribution optical network, e.g. between a base station and a plurality of remote units ~~(WDM networks in general H04J 14/0278)~~}
- U H04B 10/2587
 - • using a single light source for multiple stations
- N H04B 10/2589
 - • {Bidirectional transmission}
- N H04B 10/25891
 - • • {Transmission components ([H04B 10/40](#) takes precedence)}
- U H04B 10/29
 - Repeaters
- M H04B 10/291
 - • in which processing or amplification is carried out without conversion of the main signal from optical form ~~{(fibre optical amplifiers per se H01S 3/067)}~~
- U H04B 10/2912
 - • • {characterised by the medium used for amplification or processing}
- M H04B 10/2914
 - • • • {using lumped semiconductor optical amplifiers [SOA] ~~(semiconductor optical amplifiers per se H01S 5/50)~~}
- M H04B 10/2916
 - • • • {using Raman or Brillouin amplifiers ~~(Raman or Brillouin amplifiers per se H01S 3/302)~~}
- D H04B 10/2918
 - • • {Two-way repeaters, i.e. repeaters amplifying separate upward and downward lines}
 - <administratively transferred to [H04B 10/298](#)>
- U H04B 10/293
 - • • Signal power control
- M H04B 10/294
 - • • • in a multiwavelength system, e.g. gain equalisation ~~{(for general power control in WDM systems, see also H04J 14/0221)}~~
- U H04B 10/297
 - • • Bidirectional amplification
- U H04B 10/2972
 - • • • {Each direction being amplified separately}
- N H04B 10/298
 - • • {Two-way repeaters, i.e. repeaters amplifying separate upward and downward lines}

- D H04B 10/30
- {Transmission systems employing beams of corpuscular radiation (arrangements for handling beams of corpuscular radiation, e.g. focusing, moderating, G21K 1/00)}
- WARNING
This group is no longer used for classification of new documents as from March 1, 2012. The backlog of this group and its subgroups is being continuously reclassified to H04B 10/80 and H04B 10/90
- <administratively transferred to [H04B 10/70](#) and [H04B 10/90](#)>
- U H04B 10/50
- Transmitters
- U H04B 10/501
- • {Structural aspects}
- M H04B 10/506
- • • {~~Multi-wavelength transmitters~~ *Multiwavelength transmitters*} (~~WDM systems in general H04J 14/02~~)
- U H04B 10/516
- • Details of coding or modulation
- M H04B 10/532
- • • Polarisation modulation {, e.g. *polarization polarisation* switching or transmission of a single data stream on two orthogonal *polarizations polarisations*} (~~polarization multiplexed systems H04J 14/06~~)
- U H04B 10/60
- Receivers
- M H04B 10/61
- • Coherent receivers {, i.e., optical receivers using an optical local oscillator (delay line interferometer based DPSK optical receivers [H04B 10/677](#))}
- D H04B 10/611
- • • {Intradyne, i.e., coherent receivers with a free running local oscillator having a frequency close but not phase-locked to the carrier signal}
- <administratively transferred to [H04B 10/65](#)>
- M H04B 10/615
- • • {Arrangements affecting the optical part of the receiver (~~adjustment of the frequency or phase of the local oscillator in homodyne receivers H04B 10/63, use of polarization beam splitters H04B 10/614~~)}
- U H04B 10/616
- • • {Details of the electronic signal processing in coherent optical receivers}
- M H04B 10/6166
- • • • {*Polarization Polarisation* demultiplexing, tracking or alignment of orthogonal *polarization components polarisation components*} (~~polarisation multiplex systems H04J 14/06~~)
- M H04B 10/63
- • • Homodyne {, i.e., coherent receivers where the local oscillator is locked in frequency and phase to the carrier signal}
- M H04B 10/64
- • • Heterodyne {, i.e., coherent receivers where, after the opto-electronic conversion, an electrical signal at an intermediate frequency [fIF] is obtained}
- N H04B 10/65
- • • {*Intradyne, i.e. coherent receivers with a free running local oscillator having a frequency close but not phase-locked to the carrier signal*}
- U H04B 10/80
- Optical aspects relating to the use of optical transmission for specific applications, not provided for in groups [H04B 10/03](#) - [H04B 10/70](#), e.g. optical power feeding or optical transmission through water
- U H04B 10/806
- • {Arrangements for feeding power}
- M H04B 10/808
- • • {Electrical power feeding of an optical transmission system (~~power feeding arrangements in general H04B 3/44~~)}

Project: MP0439 (H04H)

- M H04H
- BROADCAST COMMUNICATION (multiplex communication [H04J](#); pictorial communication aspects of broadcast systems [H04N](#))**

NOTES

1. In this subclass, the following terms or expressions are used with the meaning indicated:

- "broadcast" is simultaneous distribution of identical signals to plural receiving stations. The term "broadcast" does not include distribution to receiving stations which is controlled by requests or responses from the receiving stations;
- "broadcast information" covers all kinds of information distributed by broadcast systems;
- "broadcast-related information" is information required by services provided via broadcast systems, other than broadcast information;
- "broadcast time" is a time when particular broadcast information exists and is available;
- "broadcast channel" is a channel via which broadcast information is distributed, e.g. carrier waves, time slots, cables or wireless broadcast service areas;
- "broadcast space" is either a set of broadcast channels in which particular broadcast information exists and is available or a geographical area determined by the set of broadcast channels;
- "broadcast space-time" is space-time determined by broadcast space and broadcast time in which particular broadcast information exists and is available;
- "broadcast system" is a system which consists of transmitter, transponder and receiver for broadcast;
- "broadcast-related system" is a system which is directly affected by generation, broadcast, reception or use of broadcast information;
- "broadcast service" is a service directly provided by a broadcast system, i.e. distribution service of broadcast information;
- "broadcast-related service" is a service provided by broadcast-related systems;
- "A with a direct linkage to B" means that A directly affects B or that A is directly affected by B.

2. In this subclass, multi-aspect classification is applied, so that subject matter characterised by aspects covered by more than one of its groups, which is considered to represent information of interest for search, may also be classified in each of those groups.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: MP0342 (H04S)

- | | | |
|---|------------|--|
| U | H04S 3/00 | Systems employing more than two channels, e.g. quadraphonic (H04S 5/00, H04S 7/00 take precedence) |
| M | H04S 3/006 | • {in which a plurality of audio signals are transformed in a combination of audio signals and modulated signals, e.g. CD-4 systems (for broadcasting H04H 20/88, H04B 1/1646) } |
| M | H04S 3/008 | • {in which the audio signals are in digital form, i.e. employing more than two discrete digital channels, e.g. Dolby Digital, Digital Theatre Systems [DTS] (data reduction aspects thereof based on psychoacoustics G10L 19/02)} |
| U | H04S 7/00 | Indicating arrangements; Control arrangements, e.g. balance control |
| M | H04S 7/30 | • {Control circuits for electronic adaptation of the sound field (non-adaptive circuits, i.e. manually adjustable or static, for enhancing the sound image or the spatial distribution H04S 1/002, H04S 3/002) } |
| M | H04S 7/305 | • {Electronic adaptation of stereophonic audio signals to reverberation of the listening space (H04S 7/301 takes precedence; arrangements for producing a reverberation or echo sound G10K 15/08; for public address systems H04R 27/00, H04R 29/00)} |

- M H04S 7/307 • {Frequency adjustment, e.g. tone control ([H04S 7/301](#) takes precedence; ~~circuits for correcting the frequency response of transducers H04R 3/04; tone control circuits in amplifiers per se H03G 5/00~~)}
- M H04S 7/40 • {Visual indication of stereophonic sound image (~~visual indication of individual signal levels H04R 29/008~~)}

Project: MP0439 (H04W)

- M H04W **WIRELESS COMMUNICATION NETWORKS (broadcast communication [H04H](#); communication systems using wireless links for non-selective communication, e.g. wireless extensions [H04M 1/72](#))**

NOTES1. This subclass covers :

- communication networks for selectively establishing one or a plurality of wireless communication links between a desired number of users or between users and network equipment, for the purpose of transferring information via these wireless communication links;
- networks deploying an infrastructure for mobility management of wireless users connected thereto, e.g. cellular networks, WLAN [Wireless Local Area Network], wireless access networks, e.g. WLL [Wireless Local Loop] or self-organising wireless communication networks, e.g. ad hoc networks;
- planning or deployment specially adapted for the above-mentioned wireless networks;
- services or facilities specially adapted for the above-mentioned wireless networks;
- arrangements or techniques specially adapted for the operation of the above-mentioned wireless networks.

2. This subclass does not cover :

- communication systems using wireless extensions, i.e. wireless links without selective communication, e.g. cordless telephones, which are covered by group [H04M 1/72](#);
- broadcast communication, which is covered by subclass [H04H](#).

3. In this subclass, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0501-F (H04W)

- U H04W 4/00 **Services specially adapted for wireless communication networks; Facilities therefor**

NOTES

1. This group covers mobile application services or application service signalling for communication over wireless networks.
2. This group focuses on application services specially adapted for wireless networks or adjusted to the wireless environment
3. In this group, the first place priority rule is not applied, i.e. the common rule is applied.

M	H04W 4/02	<ul style="list-style-type: none"> Services making use of location information <p><u>WARNING</u> Group H04W 4/02 is incomplete pending reclassification of documents from groups H04W 4/04, H04W 4/043, and H04W 4/046. Group H04W 4/02 is also impacted by reclassification into groups H04W 4/024 and H04W 4/029. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H04W 4/021	<ul style="list-style-type: none"> Services related to particular areas, e.g. point of interest [POI] services, venue services or geofences <p><u>WARNING</u> Group H04W 4/021 is incomplete pending reclassification of documents from groups H04W 4/04, H04W 4/043 and H04W 4/046. Groups H04W 4/04, H04W 4/043, H04W 4/046 and H04W 4/021 should be considered in order to perform a complete search.</p>
M	H04W 4/022	<ul style="list-style-type: none"> {with dynamic range variability} <p><u>WARNING</u> Group H04W 4/022 is incomplete pending reclassification of documents from groups H04W 4/04, H04W 4/043 and H04W 4/046. Groups H04W 4/04, H04W 4/043, H04W 4/046 and H04W 4/022 should be considered in order to perform a complete search.</p>
M	H04W 4/023	<ul style="list-style-type: none"> {using mutual or relative location information between multiple location based services [LBS] targets or of distance thresholds} <p><u>WARNING</u> Group H04W 4/023 is incomplete pending reclassification of documents from groups H04W 4/04, H04W 4/043 and H04W 4/046. Groups H04W 4/04, H04W 4/043, H04W 4/046 and H04W 4/023 should be considered in order to perform a complete search.</p>
M	H04W 4/024	<ul style="list-style-type: none"> Guidance services <p><u>WARNING</u> Group H04W 4/024 is incomplete pending reclassification of documents from groups H04W 4/02, H04W 4/04, H04W 4/043 and H04W 4/046. Groups H04W 4/02, H04W 4/04, H04W 4/043, H04W 4/046 and H04W 4/024 should be considered in order to perform a complete search.</p>
M	H04W 4/025	<ul style="list-style-type: none"> {using location based information parameters} <p><u>WARNING</u> Group H04W 4/025 is incomplete pending reclassification of documents from groups H04W 4/04, H04W 4/043 and H04W 4/046. Groups H04W 4/04, H04W 4/043, H04W 4/046 and H04W 4/025 should be considered in order to perform a complete search.</p>
M	H04W 4/026	<ul style="list-style-type: none"> {using orientation information, e.g. compass} <p><u>WARNING</u> Group H04W 4/026 is incomplete pending reclassification of documents from groups H04W 4/04, H04W 4/043 and H04W 4/046. Groups H04W 4/04, H04W 4/043, H04W 4/046 and H04W 4/026 should be considered in order to perform a complete search.</p>

M	H04W 4/027	<ul style="list-style-type: none"> • • {using movement velocity, acceleration information} <p><u>WARNING</u> Group H04W 4/027 is incomplete pending reclassification of documents from groups H04W 4/04, H04W 4/043 and H04W 4/046. Groups H04W 4/04, H04W 4/043, H04W 4/046 and H04W 4/027 should be considered in order to perform a complete search.</p>
M	H04W 4/029	<ul style="list-style-type: none"> • • Location-based management or tracking services <p><u>WARNING</u> Group H04W 4/029 is incomplete pending reclassification of documents from groups H04W 4/02, H04W 4/04, H04W 4/043 and H04W 4/046. Groups H04W 4/02, H04W 4/04, H04W 4/043, H04W 4/046 and H04W 4/029 should be considered in order to perform a complete search.</p>
D	H04W 4/04 —(Frozen)	<ul style="list-style-type: none"> • • {using association of physical positions and logical data} in a dedicated environment, e.g. buildings or vehicles <p><u>WARNING</u> Group H04W 4/04 is no longer used for the classification of documents as of February 1, 2018. The content of this group is being reclassified into groups H04W 4/02 — H04W 4/029, and H04W 4/30 — H04W 4/48. All groups listed in this Warning should be considered in order to perform a complete search.</p>
D	H04W 4/043 —(Frozen)	<ul style="list-style-type: none"> • • • {using ambient awareness, e.g. involving buildings using floor or room numbers} <p><u>WARNING</u> Group H04W 4/043 is no longer used for the classification of documents as of February 1, 2018. The content of this group is being reclassified into groups H04W 4/02 — H04W 4/029, and H04W 4/33. All groups listed in this Warning should be considered in order to perform a complete search.</p>
D	H04W 4/046 —(Frozen)	<ul style="list-style-type: none"> • • • {involving vehicles, e.g. floating traffic data [FTD] or vehicle traffic prediction} <p><u>WARNING</u> Group H04W 4/046 is no longer used for the classification of documents as of February 1, 2018. The content of this group is being reclassified into groups H04W 4/02 — H04W 4/029, and H04W 4/40 — H04W 4/48. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H04W 4/20	<ul style="list-style-type: none"> • Services signaling; Auxiliary data signalling, i.e. transmitting data via a non-traffic channel <p><u>WARNING</u> Group H04W 4/20 is impacted by reclassification into groups H04W 4/21 and H04W 4/23. Groups H04W 4/20, H04W 4/21, and H04W 4/23 should be considered in order to perform a complete search.</p>
M	H04W 4/21	<ul style="list-style-type: none"> • • for social networking applications <p><u>WARNING</u> Group H04W 4/21 is incomplete pending reclassification of documents from group H04W 4/20. Groups H04W 4/20 and H04W 4/21 should be considered in order to perform a complete search.</p>

M	H04W 4/23	<ul style="list-style-type: none"> • for mobile advertising <p><u>WARNING</u> Group H04W 4/23 is incomplete pending reclassification of documents from group H04W 4/20. Groups H04W 4/20 and H04W 4/23 should be considered in order to perform a complete search.</p>
M	H04W 4/30	<ul style="list-style-type: none"> • Services specially adapted for particular environments, situations or purposes <p><u>WARNING</u> Group H04W 4/30 is incomplete pending reclassification of documents from group H04W 4/04. Groups H04W 4/04 and H04W 4/30 should be considered in order to perform a complete search.</p>
M	H04W 4/33	<ul style="list-style-type: none"> • for indoor environments, e.g. buildings <p><u>WARNING</u> Group H04W 4/33 is incomplete pending reclassification of documents from groups H04W 4/04 and H04W 4/043. Groups H04W 4/04, H04W 4/043 and H04W 4/33 should be considered in order to perform a complete search.</p>
M	H04W 4/35	<ul style="list-style-type: none"> • for the management of goods or merchandise <p><u>WARNING</u> Group H04W 4/35 is incomplete pending reclassification of documents from group H04W 4/04. Groups H04W 4/04 and H04W 4/35 should be considered in order to perform a complete search.</p>
M	H04W 4/38	<ul style="list-style-type: none"> • for collecting sensor information <p><u>WARNING</u> Group H04W 4/38 is incomplete pending reclassification of documents from group H04W 4/04. Groups H04W 4/04 and H04W 4/38 should be considered in order to perform a complete search.</p>
M	H04W 4/40	<ul style="list-style-type: none"> • for vehicles, e.g. vehicle-to-pedestrians [V2P] <p><u>WARNING</u> Group H04W 4/40 is incomplete pending reclassification of documents from groups H04W 4/04 and H04W 4/046. Groups H04W 4/04, H04W 4/046 and H04W 4/40 should be considered in order to perform a complete search.</p>
M	H04W 4/42	<ul style="list-style-type: none"> • for mass transport vehicles, e.g. buses, trains or aircraft <p><u>WARNING</u> Group H04W 4/42 is incomplete pending reclassification of documents from groups H04W 4/04 and H04W 4/046. Groups H04W 4/04, H04W 4/046 and H04W 4/42 should be considered in order to perform a complete search.</p>
M	H04W 4/44	<ul style="list-style-type: none"> • for communication between vehicles and infrastructures, e.g. vehicle-to-cloud [V2C] or vehicle-to-home [V2H] <p><u>WARNING</u> Group H04W 4/44 is incomplete pending reclassification of documents from groups H04W 4/04 and H04W 4/046.</p>

Groups H04W 4/04, H04W 4/046 and H04W 4/44 should be considered in order to perform a complete search.

- M H04W 4/46 . . . for vehicle-to-vehicle communication [V2V]

WARNING

Group H04W 4/46 is incomplete pending reclassification of documents from groups H04W 4/04 and H04W 4/046.
Groups H04W 4/04, H04W 4/046 and H04W 4/46 should be considered in order to perform a complete search.

- M H04W 4/48 . . . for in-vehicle communication

WARNING

Group H04W 4/48 is incomplete pending reclassification of documents from groups H04W 4/04 and H04W 4/046.
Groups H04W 4/04, H04W 4/046 and H04W 4/48 should be considered in order to perform a complete search.

Project: RP0532 (H04W)

U H04W 28/00 Network traffic or resource management

- U H04W 28/02 . Traffic management, e.g. flow control or congestion control
C H04W 28/08 . . Load balancing or load distribution

WARNING

Group H04W 28/08 is impacted by re-classification into groups H04W 28/0804 - H04W 28/0846 and groups H04W 28/0858 - H04W 28/0992.
All groups listed in this Warning should be considered in order to perform a complete search.

- N H04W 28/0804 . . . {between access entities (reselecting a network for handling traffic H04W 36/22; wireless resource allocation where an allocation plan is defined based on load H04W 72/0486)}

WARNING

Groups H04W 28/0804 - H04W 28/0823 are incomplete pending reclassification of documents from group H04W 28/08.
All groups listed in this Warning should be considered in order to perform a complete search.

- N H04W 28/0808 {between base stations}
N H04W 28/0812 {of same hierarchy level}
N H04W 28/0815 {of different hierarchy levels, e.g. Master Evolved Node B [MeNB] or Secondary Evolved node B [SeNB]}
N H04W 28/0819 {of different Radio Access Technologies [RATs], e.g. LTE or WiFi}
N H04W 28/0823 {between wireless and wire-based access points, e.g. via LTE and via DSL connected access points}
N H04W 28/0827 . . . {Triggering entity}

WARNING

Groups H04W 28/0827 - H04W 28/0838 are incomplete pending reclassification of documents from group H04W 28/08.
All groups listed in this Warning should be considered in order to perform a complete search.

- N H04W 28/0831 {Core entity}

- N H04W 28/0835 . . . {Access entity, e.g. eNB}
- N H04W 28/0838 . . . {User device}
- N H04W 28/0842 . . . {among core entities}
- WARNING
Group [H04W 28/0842](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0842](#) should be considered in order to perform a complete search.
- N H04W 28/0846 . . . {between network providers, e.g. operators (selecting a network or a communication service [H04W 40/18](#))}
- WARNING
Group [H04W 28/0846](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0846](#) should be considered in order to perform a complete search.
- U H04W 28/085 . . . {among bearers or channels}
- N H04W 28/0858 . . . {among entities in the uplink}
- WARNING
Group [H04W 28/0858](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0858](#) should be considered in order to perform a complete search.
- N H04W 28/0867 . . . {among entities in the downlink}
- WARNING
Group [H04W 28/0867](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0867](#) should be considered in order to perform a complete search.
- N H04W 28/0875 . . . {to or through Device to Device [D2D] links, e.g. direct-mode links}
- WARNING
Group [H04W 28/0875](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0875](#) should be considered in order to perform a complete search.
- N H04W 28/0883 . . . {between entities in ad-hoc networks}
- WARNING
Groups [H04W 28/0883](#) and [H04W 28/0892](#) are incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#), [H04W 28/0883](#) and [H04W 28/0892](#) should be considered in order to perform a complete search.
- N H04W 28/0892 . . . {between different intermediate nodes}
- N H04W 28/09 . . . {Management thereof}
- WARNING
Group [H04W 28/09](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/09](#) should be considered in order to perform a complete search.

- N H04W 28/0908 {based on time, e.g. for a critical period only}
- WARNING
Group [H04W 28/0908](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0908](#) should be considered in order to perform a complete search.
- N H04W 28/0917 {based on the energy state of entities}
- WARNING
Group [H04W 28/0917](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0917](#) should be considered in order to perform a complete search.
- N H04W 28/0925 {using policies}
- WARNING
Groups [H04W 28/0925](#) - [H04W 28/095](#) are incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0925](#) should be considered in order to perform a complete search.
- N H04W 28/0933 {based on load-splitting ratios}
- N H04W 28/0942 {based on measured or predicted load of entities- or links}
- N H04W 28/095 {based on usage history, e.g. usage history of devices}
- N H04W 28/0958 {based on metrics or performance parameters}
- WARNING
Groups [H04W 28/0958](#) – [H04W 28/0983](#) are incomplete pending re-classification of documents from group [H04W 28/08](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H04W 28/0967 {Quality of Service [QoS] parameters}
- N H04W 28/0975 {for reducing delays}
- N H04W 28/0983 {for optimizing bandwidth or throughput}
- N H04W 28/0992 {based on the type of application}
- WARNING
Group [H04W 28/0992](#) is incomplete pending re-classification of documents from group [H04W 28/08](#).
Groups [H04W 28/08](#) and [H04W 28/0992](#) should be considered in order to perform a complete search.

Project: MP0439 (H05F)

M H05F **STATIC ELECTRICITY; NATURALLY-OCCURRING ELECTRICITY**
 (electrostatic machines [H02N](#); uses of electricity in performing operations, e.g. precipitation, see the relevant subclasses for the operations)

NOTES

1. This subclass covers methods or arrangements for preventing the formation of electrostatic charges on bodies or for carrying-off these charges after their formation.
2. This subclass does not cover specific applications of the above-mentioned methods or arrangements, e.g. during the manufacture of artificial fibres or films, which are covered by the relevant subclasses.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0132-F (H05K)

U H05K 13/00 **Apparatus or processes specially adapted for manufacturing or adjusting assemblages of electric components**

U H05K 13/02 • Feeding of components

M H05K 13/021 • • {Loading or unloading of containers ([H05K 13/028](#) takes precedence)}

WARNING

~~Group H05K 13/021 is impacted by reclassification into group H05K 13/0215. Groups H05K 13/021 and H05K 13/0215 should be considered in order to perform a complete search.~~

M H05K 13/0215 • • {Interconnecting of containers, e.g. splicing of tapes}

WARNING

~~Group H05K 13/0215 is incomplete pending reclassification of documents from group H05K 13/021. Groups H05K 13/021 and H05K 13/0215 should be considered in order to perform a complete search.~~

U H05K 13/04 • Mounting of components {, e.g. of leadless components}

M H05K 13/0404 • • {Pick-and-place heads or apparatus, e.g. with jaws}

WARNING

~~Group H05K 13/0404 is impacted by reclassification into groups H05K 13/0406, H05K 13/0408, H05K 13/041, H05K 13/0411 and H05K 13/0413. All groups listed in this Warning should be considered in order to perform a complete search.~~

M H05K 13/0406 • • • {Drive mechanisms for pick-and-place heads, e.g. details relating to power transmission, motors or vibration damping}

WARNING

~~Group H05K 13/0406 is incomplete pending reclassification of documents from groups H05K 13/0404, H05K 13/0413 and H05K 13/0452. All groups listed in this Warning should be considered in order to perform a complete search.~~

M	H05K 13/0408	<ul style="list-style-type: none"> • • • {Incorporating a pick-up tool} <p><u>WARNING</u> Group H05K 13/0408 is incomplete pending reclassification of documents from group H05K 13/0404. Group H05K 13/0408 is also impacted by reclassification into group H05K 13/0409. Groups H05K 13/0404, H05K 13/0408 and H05K 13/0409 should be considered in order to perform a complete search.</p>
M	H05K 13/0409	<ul style="list-style-type: none"> • • • {Sucking devices} <p><u>WARNING</u> Group H05K 13/0409 is incomplete pending reclassification of documents from group H05K 13/0408. Groups H05K 13/0408 and H05K 13/0409 should be considered in order to perform a complete search.</p>
M	H05K 13/041	<ul style="list-style-type: none"> • • • {having multiple pick-up tools} <p><u>WARNING</u> Group H05K 13/041 is incomplete pending reclassification of documents from groups H05K 13/0404, H05K 13/0413 and H05K 13/0452. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H05K 13/0411	<ul style="list-style-type: none"> • • • {having multiple mounting heads} <p><u>WARNING</u> Group H05K 13/0411 is incomplete pending reclassification of documents from groups H05K 13/0404 and H05K 13/0452. Groups H05K 13/0404, H05K 13/0452 and H05K 13/0411 should be considered in order to perform a complete search.</p>
M	H05K 13/0413	<ul style="list-style-type: none"> • • • {with orientation of the component while holding it; Drive mechanisms for gripping tools, e.g. lifting, lowering or turning of gripping tools} <p><u>WARNING</u> Group H05K 13/0413 is incomplete pending reclassification of documents from groups H05K 13/0404 and H05K 13/0452. Group H05K 13/0413 is also impacted by reclassification into groups H05K 13/0406 and H05K 13/041. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H05K 13/0417	<ul style="list-style-type: none"> • • {Feeding with belts or tapes} <p><u>WARNING</u> Group H05K 13/0417 is impacted by reclassification into group H05K 13/0419. Groups H05K 13/0417 and H05K 13/0419 should be considered in order to perform a complete search.</p>
M	H05K 13/0419	<ul style="list-style-type: none"> • • • {tape feeders} <p><u>WARNING</u> Group H05K 13/0419 is incomplete pending reclassification of documents from group H05K 13/0417. Groups H05K 13/0417 and H05K 13/0419 should be considered in order to perform a complete search.</p>

M	H05K 13/0452	<ul style="list-style-type: none"> • {Mounting machines or lines comprising a plurality of tools for guiding different components to the same mounting place (H05K 13/0406, H05K 13/041 take precedence)} <p>WARNING Group H05K 13/0452 is impacted by reclassification into groups H05K 13/0406, H05K 13/041, H05K 13/0411 and H05K 13/0413. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H05K 13/08	<ul style="list-style-type: none"> • Monitoring manufacture of assemblages <p>WARNING Group H05K 13/08 is impacted by reclassification into groups H05K 13/081, H05K 13/0812, H05K 13/0813, H05K 13/0815, H05K 13/0817, H05K 13/0818, H05K 13/082, H05K 13/083, H05K 13/084, H05K 13/085, H05K 13/0853, H05K 13/0857, H05K 13/086, H05K 13/087, H05K 13/0882, H05K 13/0885, H05K 13/0888, H05K 13/089 and H05K 13/0895. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H05K 13/081	<ul style="list-style-type: none"> • {Integration of optical monitoring devices in assembly lines; Processes using optical monitoring devices specially adapted for controlling devices or machines in assembly lines} <p>WARNING Group H05K 13/081 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/081 should be considered in order to perform a complete search.</p>
M	H05K 13/0812	<ul style="list-style-type: none"> • {the monitoring devices being integrated in the mounting machine, e.g. for monitoring components, leads, component placement} <p>WARNING Group H05K 13/0812 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0812 should be considered in order to perform a complete search.</p>
M	H05K 13/0813	<ul style="list-style-type: none"> • {Controlling of single components prior to mounting, e.g. orientation, component geometry (H05K 13/0812 takes precedence)} <p>WARNING Group H05K 13/0813 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0813 should be considered in order to perform a complete search.</p>
M	H05K 13/0815	<ul style="list-style-type: none"> • {Controlling of component placement on the substrate during or after manufacturing} <p>WARNING Group H05K 13/0815 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0815 should be considered in order to perform a complete search.</p>

M	H05K 13/0817	<ul style="list-style-type: none"> • {Monitoring of soldering processes (inspection of solder joints or of printed solder paste G01N 21/95684)} <p><u>WARNING</u> Group H05K 13/0817 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0817 should be considered in order to perform a complete search.</p>
M	H05K 13/0818	<ul style="list-style-type: none"> • {Setup of monitoring devices prior to starting mounting operations; Teaching of monitoring devices for specific products; Compensation of drifts during operation, e.g. due to temperature shifts} <p><u>WARNING</u> Group H05K 13/0818 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0818 should be considered in order to perform a complete search.</p>
M	H05K 13/082	<ul style="list-style-type: none"> • {Integration of non-optical monitoring devices, i.e. using non-optical inspection means, e.g. electrical means, mechanical means or X-rays} <p><u>WARNING</u> Group H05K 13/082 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/082 should be considered in order to perform a complete search.</p>
M	H05K 13/083	<ul style="list-style-type: none"> • {Quality monitoring using results from monitoring devices, e.g. feedback loops (H05K 13/084 takes precedence)} <p><u>WARNING</u> Group H05K 13/083 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/083 should be considered in order to perform a complete search.</p>
M	H05K 13/084	<ul style="list-style-type: none"> • {Product tracking, e.g. of substrates during the manufacturing process; Component traceability} <p><u>WARNING</u> Group H05K 13/084 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/084 should be considered in order to perform a complete search.</p>
M	H05K 13/085	<ul style="list-style-type: none"> • {Production planning, e.g. of allocation of products to machines, of mounting sequences at machine or facility level} <p><u>WARNING</u> Group H05K 13/085 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/085 should be considered in order to perform a complete search.</p>
M	H05K 13/0853	<ul style="list-style-type: none"> • {Determination of transport trajectories inside mounting machines} <p><u>WARNING</u> Group H05K 13/0853 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0853 should be considered in order to perform a complete search.</p>

M	H05K 13/0857	<ul style="list-style-type: none"> • {Product-specific machine setup; Changeover of machines or assembly lines to new product type} <p><u>WARNING</u> Group H05K 13/0857 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0857 should be considered in order to perform a complete search.</p>
M	H05K 13/086	<ul style="list-style-type: none"> • {Supply management, e.g. supply of components or of substrates} <p><u>WARNING</u> Group H05K 13/086 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/086 should be considered in order to perform a complete search.</p>
M	H05K 13/087	<ul style="list-style-type: none"> • {Equipment tracking or labelling, e.g. tracking of nozzles, feeders or mounting heads} <p><u>WARNING</u> Group H05K 13/087 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/087 should be considered in order to perform a complete search.</p>
M	H05K 13/0882	<ul style="list-style-type: none"> • {Control systems for mounting machines or assembly lines, e.g. centralized control, remote links, programming of apparatus and processes as such (H05K 13/083 takes precedence)} <p><u>WARNING</u> Group H05K 13/0882 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0882 should be considered in order to perform a complete search.</p>
M	H05K 13/0885	<ul style="list-style-type: none"> • {Power supply} <p><u>WARNING</u> Group H05K 13/0885 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0885 should be considered in order to perform a complete search.</p>
M	H05K 13/0888	<ul style="list-style-type: none"> • {Ergonomics; Operator safety; Training; Failsafe systems} <p><u>WARNING</u> Group H05K 13/0888 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/0888 should be considered in order to perform a complete search.</p>
M	H05K 13/089	<ul style="list-style-type: none"> • {Calibration, teaching or correction of mechanical systems, e.g. of the mounting head} <p><u>WARNING</u> Group H05K 13/089 is incomplete pending reclassification of documents from group H05K 13/08. Groups H05K 13/08 and H05K 13/089 should be considered in order to perform a complete search.</p>

- M H05K 13/0895 • • {Maintenance systems or processes, e.g. indicating need for maintenance}

WARNING

~~Group H05K 13/0895 is incomplete pending reclassification of documents from group H05K 13/08.~~

~~Groups H05K 13/08 and H05K 13/0895 should be considered in order to perform a complete search.~~